

THE PRINCETON PACKET



SOLUTIONS

By Huck Fairman

Town Planning: Necessary responses to our changing town and world

Most local readers know we need to reduce emissions and can do so by turning to electric and hybrid vehicles, to solar panels, to wind and water generated electricity and to other green technologies. But a strategy not widely recognized is “town planning,” which considers the location and mixed purposes of new buildings, as well as the transportation that serves them.

Sustainable Princeton and the Princeton Public Library (again sponsored by NRG), presented another in their series of talks on sustainability. This one, to this resident, was among the most surprising, interesting and informative.

Shana Weber, Princeton University’s founding director of the Office of Sustainability and a leading force in focusing the University’s efforts to become sustainable, introduced the evening’s topic and its three speakers.

Weber pointed out that the key to any town or state strategy for sustainability is a “Climate Action Plan” – the combination of goals and programs necessary to make towns and states more resilient to changing environments and extreme weather and to reduce emissions. The town goal, here, is to reduce emissions by 80 percent by 2050.

Most of our emissions come from two sources: heating and cooling systems generated from buildings, as well as transportation. Weber noted that while there are five different local working groups tackling various issues, this evening’s talk would report on one, land use and transportation.

Around the nation, she told us, some states and municipalities have undertaken ambitious programs. California will require all buses to be electric by 2029. Virginia is planning for similar change. Providence, Rhode Island, will be adopting not only electric buses but autonomous, electric shuttles.

Having set the broad stage, Weber then introduced the first speaker, Chris Cosenza, planner and project manager for the Princeton office of the national architectural firm, Looney, Ricks, Kiss. (The names of the originating principles – not a riddle).

Cosenza has worked on projects around New Jersey and abroad. One of the insights from his experience is that planning affects emissions. Where buildings are located in a community and what their purposes are in relation to each other affect vehicular traffic. By planning and integrating residences, businesses, community services,

public spaces, entertainment and dining facilities, a community can reduce vehicular traffic and emissions, while making it more congenial or people-friendly.

Neighborhoods of new or renovated buildings that place residences above businesses, through “mixed-use development,” reduce the need for driving. Planned, redesigned sidewalks and parks lure pedestrians out of their cars. Improving the “walkability” of a town has traffic-reduction, health and social benefits. People enjoy public gathering places. They will patronize businesses they can reach in a ten-minute walk. This access reduces the cost to individuals of transportation. Safe bicycling infrastructure offers the same benefits.

One way to institute these changes is for towns to adopt “Form-based building codes.” These require more accessible building fronts and doorway design, along with improved sidewalks in order to encourage pedestrians.

The second speaker, Ralph Widner, trustee of the Princeton Transportation Fund, informed the audience that one third of local emissions come from transportation; and most vehicles are cars. Reduce their numbers, and emissions will be reduced.

Widner also revealed that 70 percent of town traffic comes from outside; only 19 percent originates in Princeton. Strategies to reduce that volume should be included in the action plan. One idea is to provide out-of-town drivers with convenient parking and public shuttles. But, to comprehensively deal with the problem, a Transportation Demand Management (TDM) approach and team is needed to serve the multiple components. Also, towns should consult with each other as they generate and share traffic.

Princeton University, Widner noted, has successfully designed such a system with its Tiger Transit network, which the public can use. The challenge is to harmonize the needs with availability. Conditions do not stay the same, as was seen when the hospital moved across Rte. 1, and some traffic levels were reduced.

New technologies such as Wi-Fi connections can allow for adaptable responses to capacity and frequency needs. In fact, Widner sees a number of changes coming as technology develops (autonomous shuttles...).

As with the hospital, he sees that “activity centers” may draw traffic to them outside of town, as seen in Lawrenceville along the Princeton Pike. In those cases, ride-share networks, along with free shuttles such as the free community shuttle and NJ Transit buses, and even bike sharing, may be among the solutions. He encourages employers to partner with municipalities to reduce traffic and

emissions.

Mike Hornsby, the night’s third speaker, is the chief development officer for New Jersey’s Board of Public Utilities (BPU). Its purpose is to oversee utilities, ensuring safe and adequate service, and to prepare for and make possible clean energy – particularly Governor Murphy’s clean energy agenda and the state’s Energy Master Plan, which includes off-shore wind farms, expanded solar capability and increased use of electric vehicles.

Hornsby brought a state-wide perspective to the talk. He informed us that the Energy Master plan will encourage and help finance green industries, including the electrification of state vehicles, which he observed are three times more efficient than their gas counterparts, and the support of disadvantaged communities.

He reminded us that purchasing electric cars such as the Chevy Bolt, allows a \$7,000 tax credit which can lessen the purchase price, which he observes are still too high to encourage wide-spread switching.

But, he reminded us that ride sharing can be a solution to that problem, and with battery prices dropping 10 percent per year, purchase prices should also fall.

Hornsby also noted that night-time charging of electric vehicles actually helps utilities by increasing usage when it is traditionally low ... and the lower night-time rates benefit consumers. (Some contracts between consumers and installers allow the former to be paid for sending back to the grid their excess power.)

Among the specific initiatives the state has undertaken, or will, is its financing of 8 electric buses for Camden and helping municipalities purchase EVs. (Nationally, 10 percent of buses are, or will be soon, electric.)

Hornsby then mentioned two developments which should also lead to a lowering of emissions: the development of electric pick up trucks, which make up a large percentage of in-town daytime traffic and, in conjunction with New Jersey’s return to the Regional Greenhouse Gas Initiative (RGGI – a multi-state, market-based program that establishes a regional cap on CO2 emissions and uses proceeds from purchased allowances to invest in emissions-reducing programs) the establishment of a similar program to reduce vehicular/transportation emissions.

In summary, the insights that one could take from the evening’s speakers are that there a number of planning and transportation strategies and developments that states, towns and individuals can support and adopt to reduce traffic and emissions while at the same time make our suburban living more agreeable and attractive.