1. **SGM NOTES: at beginning, while Pat is talking, enter following into chat
PAT AND STEVE MILLER REFERENCES**

SIGNUP SHEET if desire to continue discussion of support for the Green Team in your town
[**https://docs.google.com/document/d/1HpODwlXBsLhMSr1qnLg5JS-0l8irUSKaumg785LCH6I/edit**](https://docs.google.com/document/d/1HpODwlXBsLhMSr1qnLg5JS-0l8irUSKaumg785LCH6I/edit)

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If interested in joining our “50x30” team (50% reduction by 2030), join First Meeting Thursday, June 17th at 7:00 pm**

<https://us02web.zoom.us/j/83295329768?pwd=Q3E2MXFsR2h2TU1qeFZFV3RySFpOQT09>

This committee will have a mission of promoting towns, the state and the US to commit to, and achieve, a 50% reduction in greenhouse gas (GHG) emissions by 2030. We will educate and advocate through presentations to the general population as well as officials at all levels of government.
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**OUR CLIMATE ACTIVITIES:** [**http://climate.smiller.org**](http://climate.smiller.org)**;
RENEWABLE ELECTRIC SUPPLIERS (click the link halfway down page)** [**http://electric.smiller.org**](http://electric.smiller.org)**;
NJ Electric Aggregations** [NJ Cities which switched to Renewable Energy](http://climate.smiller.org/2020-1/2020-1-28-table-u.doc)
<http://climate.smiller.org/2020-1/2020-1-28-table-u.doc>
Lookup status of your city Green Team: <https://www.sustainablejersey.com/>
Click the map on right panel; click “List View” on outside top left corner of map; click “View Report”, or “View Profile”
LINKS TO [EARTHWEEK TALKS](http://climate.smiller.org/talks/2021-earthweek-MCE/index.html)
http://climate.smiller.org/talks/2021-earthweek-MCE/index.html
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Kerri Ann Lombardi; coordinator for all NJ Clean Energy speakers: kerriann.lombardi@clearesult.com ; (732) 535-0653

 **Hello, I am Pat Miller, a member of the Middletown Green Team, as well as this chapter. During Earth Week, my husband Steve and I planned and presented a series of talks on the topic – how to get to clean energy as an individual and as a town. Then last month we got the opportunity to give a shortened version of the talk at our regular Sustainable Jersey Monmouth Hub that was focused on steps Green Teams can take to get their towns on the path to 50% GHG reduction by 2030 and net zero by 2050. We have long been frustrated that SJ seems NOT to give reducing fossil fuel emissions the priority we think it should have. We think this should the NUMBER 1 priority for sustainability, and Green Teams all seem to give it short shrift.**

**I will talk about why I believe it is SO important to prioritize energy actions above ALL others to draw down our emissions before it is too late. We have really reached a tipping point – we must see a significant result within the next 8 ½ years by 2030. And we have the support of both state and federal government to do it, and of at least 70% of people in the US. And last week the leaders of the G7 agreed. Steve will then talk more about the specific actions needed. These actions are aimed not only at saving the world, but at getting to the SJ Gold Star.**

1. **Our work is advised by both Climate Reality and the (also nonprofit) Sierra Club Ready for 100 campaign. We founded the local org Middletown (NJ) for Clean Energy when we decided that we could make the biggest direct impact by working to drive our town and other towns around us toward 100% clean energy at the local level with this mission of leaving a legacy of a livable world for our children and grandchildren.**
2. **And here is the reason that saving the world is so important to us personally – our 2 grandsons.**
3. **There are many sources of manmade global warming pollution: agriculture, forest fires, transportation. But the biggest source is the burning of fossil fuels.**
4. **The cost of carbon – [Wait till sound stops – click] The #1 threat to the global economy.**
5. **We have mandates to do something about this from the state level up to the international level. The state EnergyMP is on its way to being completely codified into law that every town will be required to follow very soon. The US has now committed to even more stringent targets (50% reduction by 2030). And G7 agreed to same target days ago.**
6. **Even the well-respected Rutgers Climate Alliance warns that the consequences of not meeting the Paris targets could be catastrophic for our world.**
7. **I believe all these forces together will get us to our target, perhaps even sooner than expected. First of all, remember we must have net zero carbon emissions by 2050, to preserve a livable world for our children and grandchildren. So we must reach that target, and we will.**
8. **And why do I believe this will happen? Because the tide is turning – more and more people believe it must happen and are demanding it.**
9. **[Wait for sound] This is only one of thousands of marches and rallies that were happening more than weekly, until the pandemic cut short our ability to gather in large crowds. This was the big climate march in NYC in Sept 2019, in which Greta Thunberg spoke. We were there for that. Young people all over the world need us to make it happen. Their future is on the line. And Green Teams need to step up! This is our whole reason for being.**
10. **And If this is not reason enough, the market will drive this transition. We couldn’t stop it, even if we were intent on saving fossil fuels.**
11. **A big reason is the cost. This is what has happened in just the last 10 years. Solar has been dropping for 40 years, and in just the last 10 years has dropped by more than half. Wind power and EVs have dropped more than 75%. The price has dropped to the point that almost everywhere clean energy is cheaper than any fossil fuel. Why wouldn’t people buy it, given a choice?**
12. **And have no fear, investment in clean energy is not a job killer – quite the opposite. Every dollar we invest in clean energy not only pays the people who will do the work (creating jobs), whether it is researchers, installation technicians, or manufacturing – all of it meant to be done in the US – it creates the value of an endless source of free energy and the devices to capture and use it.**
13. **Even now, solar and wind technicians are the 2 fastest-growing job categories in the US and are projected to remain so.**
14. **So, how do we get to clean energy? We can use the typical NJ Emissions chart (which is applicable to the state as a whole, to towns, and to individuals) as a road map for our individual as well as collective path to zero emissions. This chart shows that Transportation is the largest cause of emissions in NJ, at 46%. Building Space Heating is 2nd, for a total across residential and commercial, of 22%, and Electricity Generation is 3rd, at 21%. One other point I would like to make. Do you see the orange slice on the RHS? That is actually negative emissions. In NJ we have enough tree and plant cover to sequester 8% of our emissions. This is awesome. Do not cut the trees! (And every town should have a tree ordinance.)**
15. **The NJ Energy Master Plan lays out 7 strategies for getting to clean energy:**
	* **Transportation is first, because it’s the worst.**
	* **Clean energy generation is 2nd for the state, which has the most leverage to make it happen on a large scale, but it also requires individual buy-in.**
	* **Efficiency and buildings really go together, but conversion to electric is key.**
16. **The 5th strategy is environmental justice, which must be considered in EVERY action.**
	* **6th The entire electrical grid needs to be upgraded for reliability, heavier use, and electricity flowing both directions.**
	* **Finally, we need research into new clean energy solutions, as well as a just workforce transition.**
17. **We at Middletown for Clean Energy have developed an Energy Plan for Middletown (but which could be adapted to any town, to the whole state, or to an individual.) The goal is 100% clean energy by 2050. It prioritizes steps to be taken toward cutting emissions in the order that produces the greatest savings in the first 10 years and if continued to 2050, would result in, as close as possible, 100% clean energy. The top 3 actions for the 10-year initial period are 1) switch the entire town to renewable electricity, 2) replace one quarter of current passenger cars with EVs, and 3) begin to electrify space heating for commercial and residential. (The only reason transportation is not first in this scenario is that we cannot get to 100% EV transportation in that 10-yr timeframe, whereas we could conceivably get to 100% clean electricity by 2030.) Steve is going to tell us about the steps to take to get there. STEVE STARTS HERE**
18. **Now I provide DETAILS: how Green Teams can use existing tools to reduce YOUR town GHG 50% by 2030 . I ADDED ALL REFERENCES IN CHAT.
THE BOTTOM LINE: the easy path is to follow ACTIONS defined by the “Gold Star in Energy” program provided by Sustainable Jersey. Sustainable Jersey provides the guiding star for all Green Teams in NJ.

STEP #1 as Pat said: switch your entire city to clean electricity by using “Community Choice” renewable aggregation. This has a HUGE MULTIPLIER and gets your town 40% of the way to your GHG reduction goal by 2030. Your Green Team can use a well-defined SJ ACTION, to supply Renewable electricity to all residents; the easy way is your town joining a a regional alliance. See my links for all renewable elect aggregations in NJ.**

**If your town refuses to provide cheaper, renewable electricity, then join with neighbors to take individual action:**

* **install their own rooftop (or backyard) solar. -**
* **OR - subscribe to Community Solar (available NEXT YEAR & save 10 to 20%)**
* **OR - switch to a 3rd party 100% clean supplier – (save ~10%)- LOOK AT THE CHAT for a link.**
1. **NJ is already one of the top states for rooftop solar. To accelerate solar, the Green Team can make solar easy and popular by following ACTIONS to change your town codes and policies.**
2. **The NJ legislature just approved a bill (waiting for Gov Murphy’s signature) requiring new warehouses to have solar-ready roofs. Warehouse owners, with ACRES of rooftop, rather than paying 30K/month for electricity, are likely to install solar, and zero-out their electric bill from $30K/month, and ALSO make money selling surplus solar as “Community Solar” sold to the public.**
3. **CA now requires every new home to have solar and energy efficiency features. Your Green Team can push YOUR town to enact special new building ordinances, and ask STATE legislators to adopt solar-ready new construction policies.**
4. **This is a Google Earth aerial view of my house at high noon. We ARE sequestering carbon with all these trees. New neighbors move in, and start clearing their yards of trees, with nothing to stop the deforestation in my neighborhood! Green Team ACTION is required to help preserve such trees!**
5. **Four years ago, we switched our house to a 100% clean electricity supplier; we currently save 10% on wind energy from Texas. But it is better to buy local renewable electric to stimulate local solar investments, and create local jobs. We continue to lobby our town to adopt clean energy for the entire town, to multiply our individual impact by a WHOPPING 25,000 households.**
6. **We invited several hundred neighbors, to join our “Middletown for Clean Energy”. We collectively lobby town officials via campaigns such as Sierra Club’s Ready for 100. We have a Middletown for Clean Energy booth at the Sept. Middletown Day (except 2020), from which we lobby our neighbors and town officials.**
7. **We lobby for Community Choice Aggregation because THIS SINGLE Green Team ACTION, gets us 40% of the way to our 2030 goal to HALVE GHG. AND residents save money, all at no cost to the town.**
8. **Local community solar is already a GREEN TEAM ACTION, and will be widely available next year in NJ. Middletown recently applied for the Community Solar trial, to build a canopy over the train station parking lot, like this photo. Middletown proposes discounted electricity to the seniors and low income folks in MT.**
9. **By 2035, NJ will have 7500 MW offshore wind 15 mi off the coast. This might provide 1/3 to 1/2 of NJ total power needs.**
10. **This slide was discussed earlier by Pat. Up to now, I concentrated on electricity – at 21%,- blue at left side of pie chart- our 2nd largest GHG source – and is a critical platform. But the BIGGEST GHG is transportation is green at the top: causes over 40% of your and my GHG. Switching to EVs is the most important action to begin now, to more quickly achieve 100% EVs on the road**
11. **Your new EV will usually be plugged-into your household’s clean electricity, and save you a bundle of money, esp after fed and state EV car sale incentives. YOUR community Green Team can use two Green Team Actions to stimulate EVs in your town!**
12. **We drive a Toyota Prius Prime plug-in hybrid, shown in our garage, shown charging with our 100% clean elec from our house. The battery takes us 30 miles before switching automatically to the hybrid engine We average 150MPG since buying this Prius, 3 years ago.**
13. **You can see how fast EVs have grown over the past decade. This will accelerate when EVs become cheaper than gasoline cars in the next couple of years.**
14. **Half the world’s buses will be electric in 4 years.**
15. **This is what they look like.**
16. **Green teams should lobby schools to transition to electric school buses. The diesel fumes are unhealthy for both students and us. The large BATTERIES in electric school buses might receive income by providing grid storage for intermittent wind and solar renewables.**
17. **We already have electric trucks.
PAUSE 5 seconds for truck slides (2) animations to display**
18. **And NJ is planning to transform medium-to-heavy duty diesel trucks to electric.**
19. **The 3rd highest priority is electrifying space heating and cooling. First, however, your Green Team can use fully documented ACTIONS to improve residence energy efficiency at low cost (such as added insulation, air leak sealing, switching to LED lighting and smart thermostats). And every year, SJ offers Masters degree students called “fellows” whom your town can use for FREE for several months to launch your energy efficiency programs. Pat and I used Middletown Green Team’s $49 home energy audit and completed recommended upgrades. On the left, you see a zippered refrigerator bag over the attic stairs, and on the right see additional attic insulation. At bottom right, the shiny reflective is the insulating cover over the attic stairs.**
20. **The next step is to start NOW to switch household appliances to electric, as the old fossil-fuel appliances wear out. The gas furnace has a LARGE carbon footprint. When the furnace, OR the AC needs to be replaced, then replace BOTH with a single COLD CLIMATE electric heat pump. Also replace the old fossil fueled water heater, stove and dryer. The price of operating those old appliances will be going up as their govt subsidies are phased out.**
21. **This is a short ad from JCP&L on why to switch to a heat pump. Expect to see the GAS MONOPOLY on space heating is about to come to an end. 2 CLICKS**
22. **VIDEO**
23. **This pie chart summarizes the priority actions we JUST TALKED ABOUT. Most pie segments map to 7 SJ Gold Star in Energy ACTIONS shown in GOLD letters.**

**1st: Biggest GHG saving (blue): have your city adopt clean electricity aggregation
2nd: (in red), encourage all residents to switch to EVs
3rd: (in yellow). electrify space heating
4th: in green: improve energy efficiency of homes and businesses in your town.
TONIGHT, MY BIG MESSAGE is to JOIN your town’s Green Team. Motivate your Green Team to halve your GHG emissions by 2030, by “Going for Gold.”**

1. **This data, from Sustainable Jersey, will be available to measure and track your campaign to reduce total GHG emissions from YOUR town, as YOU IMPLEMENT YOUR Green Team Gold Star in Energy ACTIONS.**
2. **Last fall, this STATUS REPORT was given to the NJ Legislature. NJ has a LONG WAY TO GO to meet the NJ GLOBAL WARMING RESPONSE ACT. The report recommends the exact same actions that Pat and I have been describing today.
Green Team members should make SJ Energy Actions highest priority – they are the keys to SAVING THE WORLD. Lobby town officials to adopt energy actions as law. Hold ongoing education sessions for residents. DOUBLE CLICK**
3. **(SHOW SILENT VIDEO): During EARTH WEEK, we held earth week presentations, in daily events, which we broadcast widely across NJ. I have only time to highlight TWO presentations:**

**FIRST: John and Diane Burke (right center) tag-teamed descriptions of their Passive House to be finished Jan, 2022 in Middletown, after 10 years of yearning and planning. This is a ZERO CARBON emission project. WATCH FOR the BURKE ANNOUNCEMENTS of public tours every week during construction in January, 2022. THE GOAL: teach zero carbon techniques to local architects and builders.**

**SECOND: Delightful Phyllis Garr (top left), of the Marlboro Green Team, narrated a pictorial story of her 20 year history of going green with heatpumps, solar panels, and her EV. She joyously cites, TO THE PENNY, the money she has made from her rooftop solar!**

**FOLLOWING is a clip to help your Green Team motivate your town residents. Kerri Ann Lombardi guides a homeowner who describes results of improved insulation, sealing airleaks, and heatpump installation. Kerri Ann Lombardi is ready to SUPPLY YOUR MEETINGS with one or more of her excellent speakers on NJ incentives and rebates for your energy-related actions.
DOUBLE CLICK**

1. **VIDEO OF KERRI ANN LOMBARDI Q&A**
2. **This is my final slide, then we are open to questions.
We emphasized that you “green Your Life”, and talk about it. Join your Green Team to multiply your leverage.
Launch SustainableJersey ENERGY ACTIONS, which you will find are fully documented. Create and meet GHG reduction goals for your town. Communicate and motivate your town’s residents & businesses to take action. The Federal government and NJ state will be helping you!!

Pat and I are available to present to you and your Green Team. This recording is available AND all slides and complete script are ALL AVAILABLE for YOU to present to your Green Team.**

**I Hope YOU will take action. Identify yourself if interested in continuing discussions. Open and complete the Google doc. A link is in the top of CHAT, and now re-entered in the BOTTOM of CHAT. You can copy and save all the links for further info. OR click the triple dots, and save a copy of chat onto your PC.**