



Meeting Minutes

Wednesday, June 23, 2021, 7:00 pm

WebEx meeting

Present: *AGAB members
 Harry Voorhees*
 Amy Latva-Kokko, Chair *
 Anil Navkal*
 Maria Bartlett*
 Beth Rasmussen*
 Joyce Losick-Yang

1. Reviewed meeting minutes from May 26th meeting:[link](#)
2. Friday June 25th, the new Climate Act begins to be implemented - [see Senator Barrett's list](#).
 - a. An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy
<https://malegislature.gov/Laws/SessionLaws/Acts/2021/Chapter8>
 1. Aggressive goals- don't have to go out as far as 2050
 2. To reach 50% by 2030 is a big challenge
 3. **Section 4 (h):**
 The interim 2030 statewide greenhouse gas emissions limit shall be at least 50 per cent below the 1990 level, and the interim 2040 statewide greenhouse gas emissions limit shall be at least 75 per cent below the 1990 level.
Sections 31(14):
 develop and promulgate, in consultation with the state board of building regulations and standards, a municipal opt-in specialized stretch energy code that includes, but is not limited to, net-zero building performance standards and a *definition of net-zero building*, designed to achieve compliance with the commonwealth's statewide greenhouse gas emission limits and sublimits established pursuant to chapter 21N.
SECTION 32. ...
 2024; (5) an additional 3 percent of sales each year thereafter until December 31, 2029; and (6).
1. *[Effective January 1, 2025 (and extending through December 31, 2029), Each retail electricity supplier must increase ..renewable energy by an additional 3 percent (rather than 2 per cent) each year, and keep it there. If all goes according to*

plan, by 2030 electricity for Massachusetts consumers will be at least 40 per cent "renewable."]

2. An Act Creating a Next Generation Roadmap for Massachusetts – Senator Barrett’s List
 - a. Section 4(h)
 - b. Section 31(14) net zero building performance
 - i. Confusion around definition of net-zero – need something actionable
 - ii. ALK to share if I hear a crystal clear actionable net zero actionable definition
 - iii. Update that DOER has not posted the 5 public hearings
 - c. Sections 32 2024 (5)
 - i. Bump up clean energy by 3% not by 2% that we have today which effectively means that if our Andover Community Power gets implemented by 2022 then we start off with $20+15=35\%$ Class I RECs. By 2045 we will have 65% RECS.
 - ii. Maria: another town is on its - 2nd round MA requires Class I (Local) First round had a lot of Texas electric wind
 - d. MassSave – way out of sync with new regulation
 - i. People want alternatives in diversity in perceived reliability- there are certain areas in MassSave that are not as aggressive
 - ii. Pacific utilities pushing hard for electrification
 - iii. Accessibility for lower income households to MassSave
 - iv. Using EEAC Energy Efficiency Advisory council as authority to challenge utilities to do better ma-eeac.org
 1. Updates on what utilities have already submitted
 2. Provide input to – their meetings are always public, posted agendas
 3. 3 year plan
 4. Provide assistance for communities doing climate action planning
 - a. Have been generous to Joyce to do outreach to targeted audiences
 - b. MA number 1 overall energy efficiency for a really long time
 - c. Are they doing all of the most progressive things? We are excelling at some things that we have to credit Mass Save for.
 - d. Give money- further the interest
 - e. Useful Efficiency programs
 - f. Underprivileged have been helped so little.
 - g. December 31st
 - h. Areas of collaboration, coordination and oversight- helpful list to keep everyone moving in the right direction. Sen. Jarrett is very detail oriented
 - v. Green House Gas Emissions Inventory June 2021 – Working Draft slides
 1. Team effort: Kate Margolies, Tony Collins (Dept of Planning), Candy Dann Jacqueline Salit
 2. Presented to Andover WECAN earlier today
 3. Intend to share to Town Manager’s office, part of Select Board Goals
 - a. Phase I – GHG inventory,

- b. Phase II – Community dialog & Priorities at climate summit April, 2022
- c. Phase III – synthesize – look at Town Ops, retrospective as a community to date and what we’re going to plan out
- 4. WHY: Want GHG plan to be science-based
- 5. WHAT:
 - a. all buildings in Andover plus off road equipment,
 - b. all vehicles registered in Andover plus the portion MBTA used in Andover.
 - c. All waste in Andover,
 - d. Each section has a residential portion and commercial
 - e. Not included:
 - i. Not refrigerant – many communities using MAPC in Massachusetts so we can compare to other towns
 - ii. Scope 3 – land use – satellite info doesn’t reach back to level of granularity
 - 1. This is an area that communities have a lot of say over – Aspirational
 - f. MassSave dataset accounts for leakages in system – pipes and distribution of natural gas. Utilities are required to report those in MassSave numbers for each town they are active in.
- 6. Bottom Line: Total Emissions MT CO₂e – Commercial and Residential are where we need to focus
 - a. Stationary: Muni, Commercial [dominates], Construction,
 - i. Anil: How accounting that commercial purchase their power to make their energy clean?
 - ii. National Grid would have us believe 18%, where as municipal is 50% is clean energy
 - 1. Not being accounted- in GHG protocol, when purchasing renewable energy and the utility gets the REC, they get the credit.
 - 2. MA power source and how green our overall grid is calculated in
 - 3. PPA – depends whether ___own RECs or purchase energy only
 - 4. This whole thing hinges upon MassSave data which is based on the utility meter – more based on kWh or Therm delivered than with the amount of green offset e.g. AHS green credit on the bill will not show
 - 5. Any virtual net metering deal will not be accounted in ghg inventory
 - 6. 872 pounds of CO₂
 - 7. PPA buys you nothing in offsetting GHG

8. Is there some other interpretation that justifies this approach
9. Out of abundance of caution not to double count – it is baked into the model
10. Andover's actions have helped everyone in the state from the new solar energy and wind facilities that people are buying in to are helping.
11. TX and Iowa have a huge amount of Wind.
12. MA is among the greenest from voluntary contribution.
13. Andover Community Power program- it would have more impact?
 - a. Andover Community Power- not only buying the kWh product and buying the RECs – can take the credit.
 - b. E.g. Raytheon – reports publicly and disclose –
14. How does Commercial Data come in?
 - a. It's in the CDP report
15. MAPC model does account when communities do green aggregation. It will be factored in, this data is 2018. We will see it in the subsequent phase.
16. For a house that has solar and uses little electrical energy, the meter shows they are consuming very little. Sold it back to the grid, should not be getting the credit. National grid – charged for full CO2 footprint plus what is bought. There is a preference in the model for "behind the meter systems". How MassSave uses the info . Unless you're MAPC and put in
17. There is not a perfect model.
18. How to account for those users that have solar. There is not easy way to get a baseline
19. What's in, what's out.
 - a. We don't tow commercial waste
 - b. We don't account for provisional waste in this
20. Can we ask commercials what they are doing? No since that is considered proprietary information
21. Joyce: there are ways to address the deficiencies – way to get into higher fidelity

- 22. Maria – how are houses heated with oil captured?
 - a. Town aggregation level ~20% using heating oil and propane
 - b. Residential [water treatment data is tracked separately, to be added]
 - c. Transportation: Passenger, rail, buses, muni, commercial
 - d. Waste (only end of life phase shown)
- 7. Comparison to MAPC Towns (Arlington, Medford, Natick)
 - a. Andover more stationary residential emissions and transportation (2014 vehicle miles travelled)
 - b. Independent google estimate is also around 500,000 MT CO₂e
 - c. We allow fairly high weights allowed for curbside pick up
 - d. Energy for waste water is tracked- that portion that is attributable to
 - e. Andover has more commercial than other towns
- 8. Andover's Higher CO₂e – so many manufacturers- unique
 - a. Manufacturing is energy intensive activity
 - b. Residential emissions is on par with Natick
- 9. High CO₂e per capita
 - a. Is Phillips Academy C&I or a mix of C&I and residential? (Amy will follow up)
 - b. SF per capita? Can pull from tax assessor's database – not a number typically published
 - c. We won't have changed our energy use
 - i. GHG emission reduction is based on reducing energy consumption as 1st priority, not use clean energy
 - ii. Our emphasis – all our efforts- how can you use less of it
 - d. DOE saying: The best energy is the energy you don't use.
 - e. Integrate building technology- save that kWh you never used.
 - i. Emphasize on MassSave
 - ii. MassSave – GSHPs allow you to reduce your energy use
 - 1. Those that can't afford that- heat pumps into the system – more ground source heat pumps
 - 2. Create districts that are ground source heat pumps
- 10. Challenges:
 - a. C&I – how to support reduce GHG
 - i. >25,000 sf MassSave will work with you to do the EUI analysis and build right in the first place
 - ii. Joyce has a mtg with MassDevelopment tomorrow about C-PACE (Commercial Property for energy retrofits for commercial projects
<https://www.massdevelopment.com/>)

- iii. Joyce is going to Rotary in July
 - b. Passenger vehicles miles reduction
 - c. Residential – reduce energy consumption [Andover commutes farther]
 - 11. Plus HeatPump – promote electrification in general – going forward can we quantify these things
- e. Saturday June 26th- 9 am in the parking lot – Space is limited!
 - i. Bike Andover Repair Clinic Pedalin’ Fools
 - 1. Fix a flat while you’re riding
 - 2. Andover TV will be there
 - 3. Bike repair toolbox in Library of Things
 - 4. Thanks to Rachel Ciaramataro and Sandy Gerraughty of DPW and to MHL <https://mhl.org/library-of-things>
 - ii. North Main Street- Caffe Nero – tentative green light to install another dual port charging station - getting quotes from vendors. Public accessible charger- state will cover up to 100% of it- up to \$50,000. It is a very central location. Putting in one now, but laying the groundwork. Level 2 chargers (slower than DC fast charge system).
 - iii. State of PV systems in Andover
 - 1. HP – had a big office on Dascomb road installed 650kW system
 - 2. Amount per year starting in 2006
 - 3. History of Andover’s green energy for celebration of Andover 375
 - 4. At one time had hydro-electricity – went from 100% renewable!
 - 5. 2006 – no credits, 1-2 cents- got full credit but no additional.
 - 6. 2007 two systems
 - 7. 2008 – jump of 100 kW system – some institute – go to building department
 - 8. 2009
 - 9. 2010 - introduced
 - 10. 2011 52
 - 11. 2012 129
 - 12. 2013 3,679 kW – Rte 93 – about 4MW system on land
 - 13. 2014 1,346 Solarize Andover program introduced
 - 14. 2015 1,306
 - 15. 2016 737
 - iv. Number of installs
 - 1. 2014 – more than doubled entire previous history 92 installs – Solarize Andover- make people aware of incentives- MassCEC – brought in trusted installer
 - 2. 2015 – 80
 - 3. 2019 – scare program would end- 96
 - 4. 2020 – relief – not going away - 72
 - 5. 2021
 - v. Solar systems Battery Storage – 90% of systems are Tesla Power wall

1. 2017 3
 2. 2018 2
 3. 2020 12
 - vi. Commercial: 14, Residential 579
 1. Commercial 8,384 kW
 2. Residential 4,733
 3. <\$3 while residential is >\$3
 - vii. Combination of MassCEC has put out – SMART Program started in 2018
 - viii. Maria; data on heat pumps? Geothermal?
 - ix. Joyce:
 1. has been looking for EV data – EV rebate – MA rebate website- credits given out within 3 months purchasing <https://mor-ev.org/>
 - a. - >200 EV in 01810
 - b. whether license plate has an EV designation at aggregate level
 2. Patrick Lawlor
3. Making AGAB matter - Ideas for different boards to consider AGAB’s recommendation on “big” projects
- a. Andover High School – Amy will report back.
 - b. HMD update: Joyce is on selection committee - Focus is largely Town Yard property- 3.5 acres, some developers are trying to work with other property owners
 - i. Is there an architect on the selection committee? Several folks on the committee have done development- some financing, site development, planning – no architect but expertise with property development expertise.
 - ii. Are any of the proposals incorporating geothermal? None at this stage.
 - iii. Timeframe- 4 Companies have been invited to develop: Trinity Financial, Legatt McCall Properties, Minco, and Procopio.
 - c. Way to communicate to various boards to value systems that Town has incorporated into Town
 - i. Amy:
 - ii. Ways to promote commercial energy reduction and promote renewable energy?
 - iii. C&I have resources for internal expertise in-house, but residential awareness
 - iv. Water department uses 1/3 of electricity of town
 - v. Capital Improvements projects- How can we can bring that aspect
 - vi. Celebrate DPW – battery operated
 - vii. AH is 100% Green
 - viii. We have Energy Star Rating for AHS
 - ix. AGAB recommends x, go in front of different bodies – here is what we think,
 - x. Our impact can be beyond municipal – a special permit – work collaboratively – great model not only for commercial and municipal to work collaboratively early on
4. 375th opportunities for Town/AGAB presence on Sept 25th? Crafts in the Park 10/2?
5. Continue with framework of establishing goals for AGAB

Pursuant to S.2475 “An Act Relative to Extending Certain COVID-19 Measures Adopted During the State of Emergency,” which was enacted into law on June 16, 2021, this meeting of the Andover Green Advisory Board will be conducted via remote participation to the greatest extent possible.

Members of the public who wish to participate in the meeting can do so by calling 978-623-8912, or by emailing joyce.losickyang@andoverma.us. Residents are encouraged to email their questions or comments ahead of the meeting – however, staff will be available to present the Andover Green Advisory Board with questions and comments received during the meeting. Please include your name and address with your question or comment.

Every effort will be made to ensure that the public can adequately access the proceedings in real time via technological means. In the event that we are unable to do so despite our best efforts, we will post on the Town’s website an audio or video recording, transcript, or other comprehensive record of the proceedings as soon as possible after the meeting.