'Recommendations to the Devens Enterprise Commission for Designing Future Incentive Programs'

November 29, 2022

Sustainable Performance Institute

DEVENS
MASSACHUSETTS

Contributing Team Members

DEC Green Incentives Sub-Committee Members:

Marty Poutry, Commissioner
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Peter Lowitt, Director
Neil Angus, Environmental Planner
Beth Suedmeyer, Associate Planner
Dona Neely, Devens Eco-Efficiency Center Director

Consultants - Sustainable Performance Institute

- Barbra Batshalom
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- Eva Rosenbloom

Project Tasks & Timeline

Nov 2021-
Feb 2022

Reviewed Existing DEC Green Building Incentives

- Including use & barrier to use

Conducted a detailed review of the Devens Enterprise Commission green building and sustainability goals, targets, regulations, incentives and programs to date including:

- Current Rules and Regulations
- 2018 MVP Program- Community Resilience Building (CRB) Workshop- Summary of Findings Report by VHB
- Devens Green Infrastructure Guidelines
- Star Communities Assessment
- 2020 ‘Devens Forward’ Climate Action & Resilience Plan

Dec 2021-
March 2022

Conducted stakeholder interviews with:

- King Street Properties
- GFI Partners
- Bristol-Myers Squibb
- SMC Ltd.
- NOW Communities LLC
- Mass Development- Real Estate, Engineering and Utilities
- Eco-Efficiency Center

Project Tasks & Timeline

Jan- April 2022

- Reviewed & Assessed Local, State, Federal Incentives & Green Building Certification Programs
- Reviewed Pending MA Regulatory Requirements to Assess Impact on DEC's Programs
- Goal Alignment- Revised Sustainability Goals to Align with New Codes and MA Executive Order
- Assessed Appropriate Tools (Requirements/Incentives) to Support Achieving DEC's Goals

April-Nov 2022

- Met with DEC Staff & Subcommittee to Review and Finalize Recommendations

The DEC has an opportunity to...

Align with State and local climate initiatives

- GHG/Carbon goals + reduction plans
- Regulation-based

Broaden scope of Green Building & REP incentives

- Use terminology /metrics that are inclusive of multiple development scales and scenarios
  - (core & shell vs tenant)
- Expand GB incentive options per project pain point
  - taxes, utility rates, technical support

Recapture missed opportunity to encourage energy efficiency with utility incentives

- Many communities leverage rebate opportunities to achieve GHG reduction goals

The DEC has an opportunity to...

CLARIFY Goals, Targets & Metrics:

- Revisit unspecified language and define parameters to translate into definable action

  "to be energy-efficient" = EUI goal

  "is preferred" = incentive-based
- Create a roadmap to achieve stated goals

INDICATE performance/planning regs:

- Clarify in terms of EUI or GHG
- Clarify with metrics

  -% above code, desired EUI compared to a national model,etc

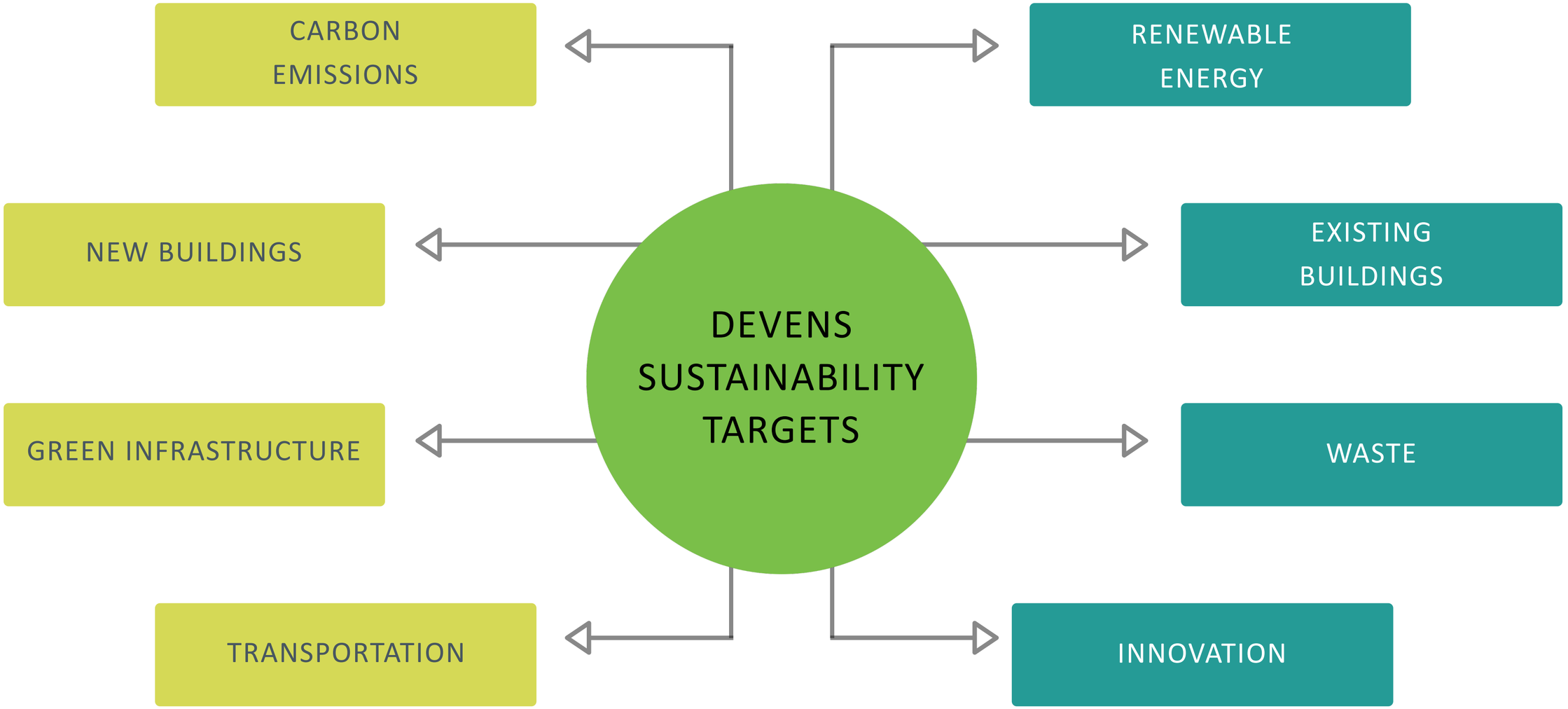
  -% of coverage area (bio-retention, permeable parking, etc.)
- Benefits for electricfication
- Parking lot size maximums (not minimums)

PROMOTE energy/water efficiencies & REP

- With rebates, incentives & tech support:

Many local & utility precedents for the efficacy of residential and commercial rebate programs

Range of Sustainability at Devens



CARBON EMISSIONS

Align with MA State Goals:

- 2035: 50% Reduction
- 2050: Carbon Neutrality

Extra credit - Unique for Devens:

- Emissions thresholds for new & existing buildings

Mechanism to achieve:

- Devens CAP
- Rules & Regs

RENEWABLE ENERGY

Align with MA State Goals:

- 2030: +40% (+REP 3% per yr)
- 2050: 100% renewable energy

Extra credit - Unique for Devens:

- Adding battery storage
- Bi-directional EV charging

Mechanism to achieve:

- Devens CAP
- Rules & Regs
- Incentives / Utility net meter

DEVENS SUSTAINABILITY TARGETS

NEW BUILDINGS

Align with MA State Goals:

- Follow MA Net Zero Stretch Code
- LEED Silver or higher
- All Electric or renewable thermal
- Embodied Carbon reduction
- EUI: 20% < average code

Extra credit - Unique for Devens:

Emissions thresholds for new based on bldg type

Mechanism to achieve:

Devens CAP

Rules & Regs

Incentives

EXISTING BUILDINGS

Align with MA State Goals:

- Existing Building electrifcation
- EUI reduction - 20% by 2025, 25% by 2030 (from 2004)

Extra credit - Unique for Devens:

- Reduction in FF/all electric by 2040
- GHGs High offenders
- Benchmarking: 2025
- Submetering

Mechanism to achieve:

Devens CAP

Rules & Regs

Incentives / Utility net meter

TRANSPORTATION

Align with MA State Goals:

- EV charging

Extra credit - Unique for Devens:

- Increase Devens CAP targets
- Shuttle to transit
- Bike lanes

Mechanism to achieve:

Rules & Regs

Incentives

INNOVATION

Align with MA State Goals:

Extra credit - Unique for Devens:

- Piloting/case study to transition from gas to electric systems for manufacturing
- Fill/ dirt removal
- Technical Support
- PPA solar

Mechanism to achieve:

Efficiency Center

Rules & Regs

Innovations to Consider beyond targets

Net-Zero Development Zones

-Install geothermal infrastructure pre-development

-BRAND remaining parcels as "Carbon neutral" zones

Renewable Thermal Districts

-Provide geo-thermal in designated areas

- MOU with utilities for targeted investment - incentivize with utilities

-Co-invest with Utility to offset demand on geothermal project

Energy Storage Capacity

-EV charging/ storage

-Municipal battery storage-

Incentive Program Recommendation Categories:

- Carbon Emissions
- Renewable Energy
- New Buildings
- Existing Buildings
- Waste & Reuse
- Transportation
- Landscaping Practices & LID
- Communications & Marketing

Incentive Program & Recommendations

- The ***goal of our incentive program*** is to help facilitate and incentivize lower carbon, sustainable development in line with the Reuse Plan goals and the Devens Climate Action Plan goals.

- SPI developed numerous recommendations to help achieve these goals and Staff has reviewed, grouped, and ranked these in order of their effectiveness and potential to help decarbonize development.

Incentive Recommendations

DEC TOP PRIORITIES–

1. **Develop a Climate Adaptation/Resiliency Checklist**
   - Part of the Unified Permitting Application Package
   - Reduce carbon intensity of developments & create mechanism encouraging evaluation of-
     - Lifecycle cost analysis,
     - Energy modeling to meet new stretch code requirements,
     - Utilization of low carbon emitting materials
     - Highlight applicable LEED credits
     - Connect designers and developers to appropriate cutting-edge resources.

Incentive Recommendations

DEC TOP PRIORITIES–

2. DEC to adopt the new Stretch Code as a requirement for all new construction and major renovations and require Applicants to **include a Net-Zero stretch code feasibility analysis/energy model option** in context of climate risk and exposure.

- Require a net zero energy feasibility study, along with the required LEED energy modeling, as part of the approvals process.
  - Seeing in black and white what the ‘gap’ is often promotes some actions that would not have been taken otherwise. For experienced A/E teams, this is not a heavy lift.
  - DEC would provide funding to support the cost of this Net-Zero energy model option.
  - An alternative path would be to require an EUI reduction of 20%

Look to examples of similar incentives in MA for incentive amounts:

a. MassSave Energy modeling
b. MassSave Passive House Certification

Incentive Recommendations

DEC TOP PRIORITIES–

3. Require businesses to establish a baseline energy and emissions inventory using Energy Star Portfolio Manager (free software)

- Similar approach to Boston and Cambridge; SPI recommends using a template already developed like BERDO (Boston) or BEUDO (Cambridge).
  - Use this to replace the existing standard condition/requirement for businesses to join EcoStar and demonstrate compliance with EcoStar Standard #25.
  - Encourage businesses to set reduction targets/goals and develop a reward/recognition program for electrification, most reduced footprint, or lowest carbon new construction.
  - Partner with organizations like National Association of Industrial and Office Properties (NAIOP – MA), Urban Land Institute (ULI), Environmental Business Council of New England (EBC), Building Owners and Managers Association (BOMA), International Facility Management Association (IFMA), - organizations who have a presence that these companies care about, which highlights both MD and DEC as leaders.

Incentive Recommendations

DEC TOP PRIORITIES–

4. Advance Greening Labs Goals

- Develop an approach for reducing or eliminating fossil fuels from lab and manufacturing facilities and campuses at Devens, based on precedent and current best practices in the market.
  - Host an educational webinar with experts on greening labs that reduce/eliminate fossil fuels for current owners and future developers. (SPI, RMI, Buro Happold and Integral to present).
  - Find case studies and precedents for using geothermal systems (NBI, NEEP, RMI, BE+ have).
  - Salerno Circle, a new development of office/lab could be a pilot project for a district scale geothermal system, using LID strategies for large scale integrated with passive energy solutions and other innovations that would be attractive to developers whose future tenants would benefit from a “plug and play” existing condition.

Incentive Recommendations

DEC TOP PRIORITIES–

5. Support electrification of existing offices and warehouses

- Encourage and support through education, case studies, technical assistance and tax incentives/utility rebates.
- Work with Devens Utilities to design program with DEC funding:
  - To meet state mandate to secure 30% of energy from renewable sources by 2030, Devens utilities GHG reduction targets as well as Devens overall).
  - Invite Jim Moore to attend future DEC meeting to discuss their plans and how the DEC can help support their efforts.

Incentive Recommendations

DEC TOP PRIORITIES–

6. Devens Eco-Efficiency Center Support-

***a. Fund Exchange Incentive Program*:**

- Help businesses eliminate/reduce use of items that are hard or impossible to recycle through a cash rewards for new by-product exchanges to further reduce waste and develop more partnerships. The Great Exchange can use (for free) the BuildingEase BE-Xchange (an online portal) to augment current activities and reach a wider audience (or simply have a free online presence for the audience already engaged)

***b. Commercial and Residential Composting support*:**

- Compliance with the State Solid Waste Masterplan. Focus on developing a composting program for food scraps targeting hotels, conference center, restaurants, BMS and other facilities with cafeterias by negotiating contract with a hauler. Involve Shane Melone from DPW and Tessa David, our regional recycling coordinator and consider a central location for drop off from Devens residents, in addition to the pick up at partnering business locations.

c. Promote Great Exchange and DEEC

- By engaging local and regional businesses through marketing and educational campaign including bringing back business roundtables on health and safety and sustainable business practices.

d. Assist with finding interns to help support this DEEC programming (MassCEC, local colleges and universities, etc.).

Incentive Recommendations

DEC TOP PRIORITIES–

7. Education and Awareness-

- Develop a communications marketing campaign to inform the project developers, permitting consultants and design teams about both the regulations AND incentives earlier in the process than currently.
  - Structure it after the existing green infrastructure guidelines and incentives sheet.

- Work with developers and existing businesses to identify and promote low-carbon development strategies they are already implementing
  - i.e. pursuing LEED cert. because DEC regs already get them ¾ of the way there, utilizing porous pavement for stormwater management and low-impact development, energy and resource efficient and resilient building design, construction, and operation.

Incentive Recommendations

DEC TOP PRIORITIES–

8. Develop battery storage opportunities to further incentivize the use of renewables.

- In some cases, this can be done unrelated to MassDevelopment utilities
  - (i.e. a free standing, container ship sized ‘battery’ for fleets that is not grid interconnected, for example)
- But in other cases, would need to partner with MassDevelopment Utilities on grid interconnected opportunities.
- Strategies include:

a. *(Work with Devens Utilities and National Grid to incentivize excess renewable energy at Devens going back to the grid, if feasible)*
b. DEC and MD co-host a Zoom conference for developers on the most cutting-edge ideas in renewable energy and electrification (this would also be touched on in the lab-focused webinar we are planning).
c. Develop a pilot project
d. Expand on the PPA with MassDevelopment for both solar energy and battery storage.
e. Revise design guidelines to make it clear from the outset that the roof is an “active” design area – to approach it for maximizing solar (or green roof) potential regardless of timing - if deploying now, or in future.

DEC GHG and Carbon Reduction Strategies identified that are currently underway or we will be implementing ASAP
(low-hanging fruit identified through this process):

DEC GHG and Carbon Reduction Strategies already underway or to be implemented ASAP:

1. Already passed a **Green and Complete Streets ordinance** which requires green infrastructure on all streets.

2. Already developed **Green Infrastructure and Low Impact Design educational programming** for DPW staff on maintenance of LID and green infrastructure (proper O&M for longer-term functioning).

DEC GHG and Carbon Reduction Strategies identified that are currently underway or we will be implementing ASAP
(low-hanging fruit identified through this process):

DEC GHG and Carbon Reduction Strategies already underway or to be implemented ASAP:

3. Support the installation of more EV Charging stations (public and private)

DEC Regulations already require a certain number of EV charging stations but DEC will also:

a. Develop educational resources and promote local, state and federal funding opportunities for EV's as well as charging infrastructure to businesses and residents
   - Create an informational sheet for businesses on both the regulations and incentives available for installing EV stations.
   - Include establishing large fleet storage charging batteries, not necessarily grid interconnected, as an additional resiliency/ESG measure for corporations.

b. DEC will work with Devens Utilities to explore opportunities to further incentive EV vehicles, fleets and charging stations as part of a GHG reduction and climate resiliency strategy.

c. Investigate ideas with Devens Utilities on how to charge for the electricity
   - Depending on how this is done, it could provide an additional stream for investment in electrification incentive.

DEC GHG and Carbon Reduction Strategies identified that are currently underway or we will be implementing ASAP
(low-hanging fruit identified through this process):

DEC GHG and Carbon Reduction Strategies already underway or to be implemented ASAP:

4. Embodied carbon reduction:

- Provide education and support for projects/developers to select low-carbon alternative materials (top ten list), along with resources from the Carbon Leadership Forum.
- Promote the use of Life Cycle Analysis (LCA) tools (Tally, EC3) to enable developers to conduct a whole building LCA.

DEC GHG and Carbon Reduction Strategies identified that are currently underway or we will be implementing ASAP
(low-hanging fruit identified through this process):

DEC GHG and Carbon Reduction Strategies already underway or to be implemented ASAP:

5. Landscaping Practices and LID Design

We are in the process of changing our Regulations to:

a. **Require vegetated roofs and porous pavement for all projects**.
   - This is consistent with our sustainability goals, Climate Action Plan, and MS4 Permitting requirements, and acknowledges the significant and successful investments many developers have already made in green infrastructure at their Devens sites.
   - Such a requirement also recognizes the desire to limit impervious surface area impacts associated with past MEPA review commitments.

b. **Groundwater irrigation well moratorium.**
   - The DEC, acting in its capacity as the Board of Health, is moving forward with this to encourage more water use reduction and limit liability and exposure to PFAS and PFOAS.
   - Could consider options/incentives to provide technical assistance for projects to reduce irrigation water use

DEC GHG and Carbon Reduction Strategies identified that are currently underway or we will be implementing ASAP
(low-hanging fruit identified through this process):

DEC GHG and Carbon Reduction Strategies already underway or to be implemented ASAP:

6. Develop a Pilot program for an EV Shuttle bus

- DEC is already working with Montachusett Area Regional Transit (MART) to re-launch the Devens shuttle service and we have requested an electric bus to help further reduce transportation emissions.

DEC GHG and Carbon Reduction Strategies identified that are currently underway or we will be implementing ASAP
(low-hanging fruit identified through this process):

DEC GHG and Carbon Reduction Strategies already underway or to be implemented ASAP:

7. Require LEED Silver Certification

- Build off existing incentive program to cover the soft costs only for consultants and USGBC fees (Need more than the $10k offered currently)
  a. Identify potential added first costs versus added long-term value
  b. Idea to determine which credits would be required by DEC, similar to the State LEED Plus requirement, to focus projects on the most important issue to Devens

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