

CITY OF NEWTON

IN BOARD OF ALDERMEN

PUBLIC FACILITIES COMMITTEE REPORT

WEDNESDAY, NOVEMBER 4, 2015

Present: Ald. Crossley (Chair), Lennon, Albright, Brousal-Glaser, Gentile, Danberg, Laredo, and Lappin

City staff present: Josh Morse (Commissioner of Public Buildings), Bill Ferguson (Project Manager; Public Buildings), Andy Savitz (Director of Sustainability), Alice Ingerson (Community Preservation Planner), James McGonagle (Commissioner of Public Works), Shane Mark (Director of Operations) and Maureen Lemieux (Chief of Staff/Chief Financial Officer)

#133-15 HIS HONOR THE MAYOR requesting authorization to enter into negotiations for the potential lease on city properties for purposes of third-party construction, ownership, and operation of on-site renewable solar energy generation from which the City will purchase electric output and/or net metering credits.
[05/11/15 @ 5:00 PM]

ITEM SPLIT INTO PART A AND PART B

PART A – Ground mounted solar panels at Rumford Avenue landfill, solar panels mounted on new carport structures at 60 Elliot Street, all roof mounted solar panel locations with the exception of City Hall, which is removed from the list of sites for solar panels.

PART B – Solar panels mounted on new carport structures at Newton South High School and solar panels mounted on new carport structures at the Library.

ACTION: APPROVED PART A 8-0; HELD PART B 8-0

NOTE: A public hearing was opened and continued on June 17, 2015 on the above request to authorize the Mayor to negotiate leases for city properties to install solar panels that would be owned and operated by a third-party company. Project Manager Bill Ferguson reviewed the request for consideration to lease thirteen city-owned sites for roof, carport, or ground mounted solar panel arrays. The June 17, 2015 Public Facilities Report is attached and provides information on the proposed locations, the proposed types of solar panels and carports.

The City released two RFPs in June 2015: one for the Rumford Avenue Landfill and one for the other twelve sites consisting of roof and carport mounted solar panels. The Rumford Avenue Landfill location would be a large ground mounted solar array with unique requirements; therefore, it is important that it is a separate RFP. The City has informed Ameresco that it would like to move forward with them on all of the sites except the landfill site. Ameresco would design, construct, operate, and maintain the solar panel systems over the lease period and the City would buy the energy produced by Ameresco Solar, Inc. through a Power Purchase Agreement. As a private company, Ameresco would receive the solar federal income

tax credit to support the generation of solar power and Solar Renewable Energy Certificates (SRECs) to sell on the open market. At the end of the twenty-year lease, the City would have the option to purchase the solar arrays or have the contractor remove the panels and equipment at no cost. The City will make a decision on what company it will work with for the Rumford Avenue Landfill project.

The Public Buildings Department has held three community meetings in different areas of the City to get feedback from residents on the solar panel projects. Mr. Ferguson reported that the community reaction has been supportive of all the projects. Mr. Ferguson provided the Committee with the attached presentation that he presented at each of the community meetings. In addition, he handed out the attached list of sites, list of key advantages to the City, a summary of kilowatts generated by the solar panels, Ameresco's overall solar panel system summary, and a proposed solar project recap.

The City expects to save approximately \$500,000 in electricity costs per year, which results in \$10,000,000 in savings over the 20-year leases. However, there is no guarantee that the electricity rate and net metering credit rate will remain the same in the outlying years of the lease; therefore, the savings could fluctuate from year to year. There is an economy of scale for net metering credits. The larger the solar array the greater the net metering credit rate; therefore the proposed ground mounted solar array at the land fill would generate more net metering credits than a smaller roof mounted project, such as the proposed panels at Fire Station #10.

The Committee members had concerns regarding the installation of solar panels on City Hall roof. The Mayor is supportive of putting the solar panels on City Hall as a symbol to encourage residents and businesses to install solar panels. The Committee members were concerned that the solar panels are not appropriate for a historic building and the panels could cause damage to the slate roof. In addition, the panels would be very visible on the pitched roof, including the main roof to the north of the main entrance of the historic building. Before solar panels are placed on any roof, Ameresco and the City would complete a detailed investigation and evaluation of the structure and condition. Commissioner of Public Buildings Josh Morse pointed out that the City is not obligated to put solar panels on each of the roofs identified as a possible location for solar panels. The City Hall location is a very small installation and would have a minimal impact on the power generated. It was suggested that the City Hall location be removed from the list of sites for solar panels. The Committee was in agreement with the suggestion.

The Committee discussed the installation of the solar array at the Rumford Avenue landfill with Mr. Ferguson and Commissioner Morse. The plan is to install four acres of ground-mounted solar panels at the site. The panels can be installed without damaging the landfill cap; therefore, the City is looking at expanding the area available for solar panels. The company that is awarded this project would dispose of the excavate materials and street sweepings stored at the landfill before installing the solar panels. The ground-mounted panels would not be visible from street level but may be visible from the third floor of the apartments located near the landfill. It was pointed out that the panels would probably be a nicer view than the materials currently located there. The City is talking with the State regarding installing the solar panels at the

landfill. The City received a loan from the State when it capped the landfill. It is likely that the City would need to pay the balance of the loan before the solar panels are installed. Chief of Staff Maureen Lemieux will confirm whether the balance must be paid prior to entering into the lease. Mr. Ferguson stated that he would be back to the Committee once the contract has been awarded and there is further information to share regarding the design and size of the array.

Several members voiced concern regarding installing carports at the library and Newton South High School. The Committee members would like to see a design for the carports before proceeding with these installs. There was also concern that there would need to be trees removed from the library parking lot to install the carport. The Committee was in favor of proceeding with carport installations at 60 Elliot Street. Members felt that once the carports were installed at Elliot Street, they would have a better sense of what carports would look like at the library and high school.

The public hearing was opened and Richard Hutchinson, 160 Lincoln Street asked for a further explanation of the solar tax credit. The tax credit is offered by the federal government to encourage the development of renewable energy. The attached information from the Department of Energy provides further details on the tax credit.

Andreea Downes, Chestnut Street, spoke on the foliage on the berms at the library. She informed the Committee that the brush on the berms is an invasive species that should be removed.

The public hearing was closed. The Committee opted to split the item into a Part A and a Part B. Part A includes the Ground mounted solar panels at Rumford Avenue landfill, solar panels mounted on new carport structures at 60 Elliot Street, all roof mounted solar panel locations with the exception of City Hall, which is removed from the list of sites for solar panels. Part B includes the solar panels mounted on new carport structures at Newton South High School and solar panels mounted on new carport structures at the Library. There was a motion to approve Part A, which carried by a vote of eight in favor and none opposed. A motion to hold Part B in order to see what the carports at 60 Elliot Street will look like and get further design information on the carports carried unanimously.

REFERRED TO PUBLIC FACILITIES AND FINANCE COMMITTEES

#144-15(2) COMMUNITY PRESERVATION COMMITTEE recommending the release and appropriation to the Public Buildings Department to complete construction of the Museum Archives and Fire Suppression project, a total of one hundred thirty-two thousand nine hundred forty-three (\$132,943), including: release of \$39,452 in the Board of Aldermen's contingency fund, as created by Board Order #144-15 dated June 15, 2015; and appropriation of \$93,491 from the Community Preservation Fund, as recommended by the Community Preservation Committee on May 27, 2015 but not yet appropriated. [10/16/15 @3:09 PM]

ACTION: **APPROVED 7-0 (Gentile not voting)**

NOTE: Commissioner of Public Buildings Josh Morse presented the request for an additional appropriation of \$93,491 from the Community Preservation Fund and the release of \$39,452 from the Board of Aldermen's contingency fund established as part of Board Order #144-15. The funds would be used to address structural issues that were discovered when the contractor began work on the fire suppression and accessibility project at the Jackson Homestead. There were photos of rotted beams, roof rafters and floor joints attached to the agenda for the meeting. The Fire Department also requested that heat trace wiring be added to the sprinkler piping. The requested funds were part of the last request for funding for this project, which the Public Facilities Committee approved but the Finance Committee voted to amend the request by reducing the funding by \$93,491. The amended request was approved by the Board of Aldermen. The Committee understood the need for the additional funds and Ald. Laredo moved approval of the item, which carried unanimously.

REFERRED TO PUBLIC FACILITIES AND FINANCE COMMITTEES

#284-15 **HIS HONOR THE MAYOR** requesting authorization to appropriate two hundred fifty thousand dollars (\$250,000) from bonded indebtedness for the purpose of funding mechanical upgrades and interior improvements at the main library.
[09/28/15 @ 1:43 PM]

ACTION: **APPROVED 8-0**

NOTE: Public Buildings Commissioner Josh Morse joined the Committee for discussion of this item, which was discussed and held for further information at the Committee's last meeting on October 21, 2015. The Public Buildings Department provided the attached summary and cost breakdown of the mechanical and interior improvements proposed for the Main Library. The mechanical improvements include replacement of the chiller, operating controls, and a cooling tower. The interior improvements are related to all of the restrooms in the library. They are in poor condition and the finishes are in need of replacement. The metal partitions and doors would be replaced with new partitions and doors made of a phenolic material that is used in our school buildings that has proven to be very durable. The current floor tiles would be replaced with epoxy flooring systems, which are easily maintained. The improvements to the bathrooms include the children's area restrooms. The current plan is to combine the existing restrooms into one family bathroom with a changing station. The Public Buildings Department is looking at the possibility of creating an additional small bathroom in the children's area and believes that there is enough space. With that, Ald. Lappin moved approval, which carried unanimously.

REFERRED TO PUBLIC SAFETY AND PUBLIC FACILITIES COMMITTEES

#310-10(4) **PUBLIC FACILITIES COMMITTEE** requesting an amendment to City of Newton Ordinances Chapter 26, Section 8D Trial program for removal of snow and ice from sidewalks. by extending the expiration date of the trial from November 1, 2015 to November 1, 2016. [10/21/15 @ 9:38 PM]

ACTION: **APPROVED 7-1 (Lappin opposed)**

NOTE: The docket item request is to extend the current trial program requiring residents to remove snow and ice in front of their properties within 30 hours after a snow event. The trial would be extended to November 1, 2016 to develop language for a permanent ordinance. The extension would also give the new Commissioner of Public Works, Jim McGonagle, an

opportunity to collect data to determine whether the permanent ordinance would need teeth like a fine. The Commissioner intends to use the 311 system to identify households that have not shoveled and randomly choose two areas of the City after each snow event to flyer households that have not complied with the shoveling requirements and revisit those households to see if the flyers got results and the sidewalks are shoveled. With that, Ald. Danberg moved approval, which carried by a vote of seven in favor and one opposed.

#82-15 ALD. SANGIOLO requesting the Public Works Department and the administration determine the cost if the City were to undertake complete sidewalk shoveling throughout the City, such costs might be charged back to residents with a fee. [03/12/15 @ 10:38 AM]

ACTION: **NO ACTION NECESSARY 8-0**

NOTE: Commissioner of Public Works Jim McGonagle researched the cost to the City of contracting out the removal of snow and ice from all sidewalks within the City. The average cost is 15 ¢ per linear foot, which would result in a cost of \$376,000 per storm. The City averages twelve snow events per year resulting in a cost of \$4.5 million per year to clear the sidewalks of snow and ice. It would be a costly and difficult undertaking for the City to clear all of the sidewalks in the City. The Docket Item does not take into consideration timing issues like how quickly after a storm would the sidewalks need to be cleared. The cost could go up or down depending on the timing of a storm and the timeframe that the sidewalks would need to be cleared. In addition, if the City were to provide sidewalk-clearing services for a fee, by State Law, the City must provide residents with the opportunity to opt out of the service every year, as the City cannot force residents to sign-up and pay for a service provided by the City. Ald. Gentile moved no action necessary, which carried unanimously.

#72-15 PUBLIC FACILITIES COMMITTEE requesting a discussion with the Administration and Department of Public Works about the extent of damage to the City resulting from the recent extreme winter conditions including roadways, sidewalks, infrastructure, buildings and how the City is preparing to cope with the needed repairs. [03/09/15 @ 4:22 PM]

ACTION: **NO ACTION NECESSARY 8-0**

NOTE: Commissioner of Public Works Jim McGonagle reviewed some of the costs of damages to roadways, sidewalks, fences and building because of last winter's severe storms. The Public Buildings Commissioner Josh Morse identified \$10,000 in building damages. The Parks and Recreation Department lost a Quonset hut, which cost \$50,000. There was approximately \$25,000 in fire hydrant repairs and \$17,000 in fence repairs. The City also spent \$20,000 for roof snow removal to prevent roof collapses at City buildings.

The Department of Public Works is working with the Fire Department on the best way to identify fire hydrant locations during storms. Public Works is also reviewing snow routes to identify and mark pinch points where fences have been hit to avoid further damages. Ald. Danberg moved no action necessary, which carried by a vote of eight in favor and none opposed.

#48-15 ALD. JOHNSON, SANGIOLO & YATES requesting a discussion with the Commissioner of Public Works regarding: (1) short and long term snow clearing

of streets and sidewalks, (2) proactive planning relative to potential issues resulting from melting snow, (3) short term plans for addressing potholes, and (4) how the Department of Public Works will use the data gathered from where potholes need to be filled to guide planning for street repairs. [02/23/15 @ 9:31 AM]

ACTION: **HELD 8-0**

NOTE: The Committee held the item until the Department of Public Works provides the Board of Aldermen with the snow operations plan. The Committee expects to receive the plan by the first meeting in December 2015.

REFERRED TO PUBLIC FACILITIES AND FINANCE COMMITTEES

#297-15 **HIS HONOR THE MAYOR** requesting an amendment to the Sewer Fund Revenue Budget by increasing the Estimated Sewer Fund Revenue Budget by one hundred seventeen thousand twenty-nine dollars (\$117,029) and decreasing the anticipated reimbursement from Water Fund by one hundred seventeen thousand twenty-nine dollars (\$117,029). [10/19/15 @ 11:54 AM]

FINANCE VOTED NO ACTION NECESSARY 6-0 ON 10/26/15

ACTION: **NO ACTION NECESSARY 7-0 (Danberg not voting)**

NOTE: The Committee received the attached letter from the Mayor's Office requesting that the item be voted no action necessary. Chief of Staff Maureen Lemieux explained that the item was docketed as a precautionary measure in case there was a shortfall in the Sewer Fund Revenue Budget; however, the fund is on track to generate more funds than anticipated. With that, Ald. Laredo moved no action necessary, which carried unanimously.

REFERRED TO PUBLIC FACILITIES AND FINANCE COMMITTEES

#298-15 **HIS HONOR THE MAYOR** requesting an amendment to the Water Revenue Budget by increasing surplus revenue and decreasing the revenue forecast from water usage. [10/19/15 @ 11:54 AM]

FINANCE VOTED NO ACTION NECESSARY 6-0 ON 10/26/15

ACTION: **NO ACTION NECESSARY 7-0 (Danberg not voting)**

NOTE: The Committee received the attached letter from the Mayor's Office requesting that the item be voted no action necessary. Chief of Staff Maureen Lemieux explained that the item was docketed as a precautionary measure in case there was a shortfall in the Water Fund Revenue Budget; however, the fund is on track to generate more funds than anticipated. With that, Ald. Laredo moved no action necessary, which carried unanimously.

Respectfully submitted,

Deborah Crossley, Chairman

#133-15 HIS HONOR THE MAYOR requesting authorization to enter into negotiations for the potential lease on city properties for purposes of third-party construction, ownership, and operation of on-site renewable solar energy generation from which the City will purchase electric output and/or net metering credits.
[05/11/15 @ 5:00 PM]

ACTION: **HEARING CONTINUED; HELD 7-0 AND REFERRED TO FINANCE**
(Albright not voting)

NOTE: Commissioner of Public Buildings Josh Morse stated that it is not the intent of the Administration to ask for a vote of the Committee to authorize the Mayor to negotiate leases on city properties to install solar panels that would be owned and operated by a third-party company but to have an informative discussion. The Administration plans to add solar panels to a number of different sites across the City. The City is considering thirteen sites for solar photovoltaic (list attached) installation. The Administration will have further information when it releases and receives responses to its Request for Proposals (RFPs) for the solar panel projects. During the process, the Public Buildings Department will continue to reach out to neighbors in the neighborhoods near all of the proposed solar panel locations.

Public Buildings Project Manager Bill Ferguson provided an overview of the proposed solar lease projects. Mr. Ferguson provided the Committee with the attached outline of the discussion items for the proposed solar projects that include background and process. In 2012, the City entered into a successful Power Purchase Agreement with Ameresco for leases for solar panels. The current metering credit received from the Eversource is 22 ¢ per kilowatt generated from the solar arrays. Ameresco receives 10 ¢ and the City receives 12 ¢ of that 22 ¢ metering credit. Annually the credits generate \$70,000 in net revenue for the City and offset carbon dioxide generated by 102 cars. The proposed solar arrays would generate between three and five times as many kilowatts of electricity as the first solar project. The Committee requested a cost benefit analysis of each projects.

The City is modeling the proposed solar panel projects on the first model except that instead of using the Request for Qualifications (RFQ) process a Request for Proposals (RFP) process would be used to solicit proposals, with pricing. There would be two RFPs released: one for the Rumford Avenue Landfill and one for the other twelve sites. The Rumford Avenue Landfill location would be a large ground mounted solar array with different concerns; therefore, it is important that it is a separate RFP. The company selected would design, construct, operate, and maintain the solar systems for a portion of the net metering credits. At the end of the twenty-year lease, the City would have the option to purchase the solar arrays or have the contractor remove the panels and equipment at no cost. It is possible that solar technology would advance and the contractor could offer to upgrade the equipment and extend the contract.

Once the proposals are received, an evaluation committee will review the proposals and select a firm by the end of August. At that point, community meetings would be held to provide details on the projects and receive input from the neighbors. The projects need to be completed

and online by December 2016 in order to benefit from the 30% Federal Solar Investment Tax Credit.

Mr. Ferguson reviewed proposed location(s) of the solar array at the Rumford Avenue Landfill using the attached map of the landfill. The solar panels would be located on four to five acres of the landfill that borders Lexington Street and would be south facing. The City is asking for options in the RFP. Option #1 would be to place the solar panels on the flat area of the proposed space in the landfill. Option #2 would include solar panels for both the slope and flat area of the proposed location within the landfill. The City is asking for both options as there may be issues with putting solar panels on the slope of the landfill such as penetrating the landfill cap and the neighbors may not want to see solar panels on the slope. It was pointed out that even the solar panels located on the flat surface would be visible from the second and third floors of the buildings around the landfill.

The Public Buildings Department is working with the Law Department regarding the existing covenants related to the landfill. The city cannot lease space for solar panels without the State's approval. The state lent the City \$2.6 million to cap the landfill and the city still owes \$500,000 on the loan. The city must consult with the state if there are any private activities on the site. Committee members also wanted assurance that the Department of Public Works had enough space at the landfill for their operations. It was explained that the landfill site is becoming more of a transfer site, as materials will be hauled offsite rather than stored at that location. The Chair asked for information on the compost operations in order to understand the needs and operation of the compost program.

Some of the twelve other proposed solar locations like the library and Newton South High School include solar canopies/carports with mounted solar panels in the parking lots. Mr. Ferguson provided photos of carport structures at Bristol Community College. The carports include LED lighting and a storm water collection system. There are many design options for carports. There was concern related to aesthetics and possible loss of parking associated with carports. The City would have input on the design of the carports and the design intent would be to minimize loss of parking spaces. The installation of carports would allow the City to put in more solar panels thereby increasing generated revenue. Committee members asked how the carports planned for the library lot would fit in architecturally with the library and City Hall. It was explained that there are different design options. The Library Board of Trustees has discussed the carports and has agreed that they are acceptable. The carports provide shade and cover for the cars. The Committee asked that when the design is developed that it be submitted to the Committee.

There should not be any significant loss of parking as a result of carports. The inverters that are part of all solar panel installations could be placed along the berm or perimeter of the parking lots. There was concern that the inverters might emit noise. The inverters make a low humming noise during daylight hours but are silent at night. The hum can be heard within 25' of the inverter but it is possible to hold a conversation when standing next to an inverter.

A Committee member asked if the City would need to clear snow off the solar panels. The solar panels absorb sunlight, which tends to melt any snow that lands on the panels. The City did not have to shovel any existing solar panels this past winter.

There was question regarding whether the RFP asks for sensitivity when a proposed site is located near abutters or the site is a historic building like City Hall. Although the RFP is not specific to locations in neighborhoods or historic buildings, the hope is that the contractors consider those factors. The City could add language but the City is more likely to get more responses if the RFP is less conditioned. The City can get all the responses and then have back and forth discussions with contractors regarding specific locations. The City Hall roof is slate, which is beautiful and durable and it would be a shame if the addition of solar panels damaged the slate roof.

The public hearing was opened and Jason and Lucy Amello, 1700 Beacon Street, commented on the proposed Angier School site for roof mounted solar panels. They feel the school is a monstrosity, which is located right across from their home. Anything incremental to the school could be an issue for them. The Amellos would like to understand what the panels would look like and asked for a street view of the site with the panels in place as part of the RFP. They were also concerned with noise from the inverter. It was explained that the inverter could be located indoors. If the inverter were located outside, it would be located behind acoustical screening to minimize noise. Ms. Amello added that the Angier School project is very intrusive to her daily life.

Jay Walter, 82 Pembroke Street, stated that there are attractive carport options. He believes that the City can find appropriate carports for the library.

Pat Maher, 81 Winslow Road, will be looking at the long side of the new Zervas Elementary School from his home. He is concerned with what the solar panels would look like. He said that with all of the mechanicals, the new school is going to be 4-stories, and believes the school was only supposed to be a two-story building. In addition, Mr. Maher is concerned that if there would be carports installed at that site, this would require tree removal. It was explained that the site is not likely to be an economically feasible site for carports and no trees will be removed

Energy Commission Chair Eric Olsen, 858 Watertown Street, stated that the City has a mix of owned and leased solar panels. He asked if the City has had any problems with the solar panels it owns. It was stated that there have been no problems. Mr. Olsen pointed out that it may make sense for the City to consider purchasing and installing the solar panels. Mr. Ferguson explained that if the City goes that route, it would not get any federal tax credits. Mr. Olsen feels that the City could earn all of the net metering credits and use those saving to pay for the capital outlay for the solar panels. Mr. Ferguson responded that the capital outlay is significant and it is nice to have turnkey maintenance. It was suggested that the Energy Commission discuss the benefits and drawbacks of the City owning solar panels.

Energy Commission Member Ed Craddock, 423 Crafts Street, added that he has had solar panels on his house since 2003 and has been advocating for solar carports since 2004. He believes all parking lots should have carports.

No one else wished to speak regarding the item and the public hearing was continued to a date to be determined. It was pointed out that the item should be referred to the Finance Committee, as there is a direct financial impact to the City related to the lease of City property for the purpose of installing solar panels. The Committee agreed and Ald. Gentile moved that the item be held for further discussion and referred to the Finance Committee. The motion carried by a vote of seven in favor and none opposed. The item is expected to be discussed again in September once the RFPs have been received and reviewed.

REFERRED TO PUBLIC SAFETY & TRANS. AND FINANCE COMMITTEES

#129-15 HIS HONOR THE MAYOR requesting authorization to appropriate the sum of two million dollars (\$2,000,000) from bonded indebtedness for the purpose of improving the traffic signals at several intersections in Auburndale and traffic improvements in Nonantum and Oak Hill, as well as other areas of the City.

05/11/15 @ 5:00 PM]

PUBLIC SAFETY APPROVED 6-0-1 (Schwartz abstaining) on 06/03/15

FINANCE COMMITTEE SPLIT THE ITEM INTO PART A AND B;

PART B WAS APPROVED BY PUBLIC SAFETY AND FINANCE

(A) \$1.2 MILLION FOR AUBURNDALE TRAFFIC IMPROVEMENT PLAN

FINANCE HELD 8-0 and REFERRED (A) TO PUBLIC FACILITIES

COMMITTEE on 06/08/15

ACTION: APPROVED 8-0

NOTE: Director of Transportation Bill Paille and representatives from WorldTech Engineering joined the Committee to provide an overview of the proposed Auburndale Square traffic improvements. The project includes some changes to the curb alignment, which requires approval by the Public Facilities Committee. All of the proposed improvements are designed to create a safer area for vehicles, pedestrians, and bicyclists and improve the level of service of the intersections in Auburndale Square. There would be no loss of legal parking spaces in the Auburndale Square area because of the proposed improvements.

The proposed plans include a change to the right hand turn lane from Lexington Street onto Commonwealth Avenue approaching Auburndale Square from the south. The west corner of Lexington Street and Commonwealth Avenue would be extended shifting the right-hand turn lane closer to Lexington Street and the island between the right hand turn lane and Lexington Street would be significantly reduced and shifted creating a shorter intersection crossing for pedestrians and bicyclists.

The change would result in the loss of one tree but would open up more green space that could be enhanced. The consultants are working with the community regarding the existing Veteran Memorial, as the improvements to the square are an opportunity to move the memorial



Solar Program- Phase 2

City of Newton, Department of Public Buildings
 October 2015

Phase 1 Solar Projects

<u>Location</u>	<u>KW</u>	<u>in service date</u>	<u>kWh/YR</u>	<u>no. of Panels</u>	<u>Annual savings</u>
Countryside Elementary School	63.70	12/31/2013	78,100	260	
Memorial Spaulding Elem. School	111.45	12/31/2013	133,900	455	
Brown Middle School	247.00	12/31/2013	305,150	988	
Newton North High School	263.25	4/14/2014	302,100	1053	
Sub-total	685.40		819,250		\$65,000
Plus City owned projects*	95.00		108,000		\$18,000
Grand total	780.40				\$83,000
* South and North HS and Oak Hill MS.					

Countryside School



Brown Middle School



Memorial Spaulding School



North High School



Phase 2 Solar Projects

Phase 2-Newton Solar PV Sites		
	<u>LOCATION</u>	<u>PROJECT DESCRIPTION</u>
1	Dept of Public Buildings: 52 Elliot Street, 02461	roof mounted
2	DPW: 60 Elliot Street, 02461	roof mounted and car ports
3	DPW: 70 Elliot Street, 02461	truck ports, car ports and roof mounted
4	Newton South High School: 140 Brandeis Rd, 02549	roof mounted, car ports
5	Library Parking lot : 330 Homer St, 02459	car ports
6	Landfill: Rumford Ave, 02466	ground mounted
7	Angier School: 1697 Beacon St., 02468	roof mounted
8	Oak Hill School: 130 Wheeler Rd, 02459	roof mounted
9	Lower Falls Com. Center : 545 Grove St, 02453	roof mounted
10	Bowen School: 280 Cypress St., 02459	roof mounted
11	Fire Station 10 and wires Building: 755 Dedham St., 02459	roof mounted
12	new Zervas School : 30 Beethoven Avenue, 02469	car ports and roof mounted
13	City Hall, 1000 Commonwealth Ave 02459	roof mounted

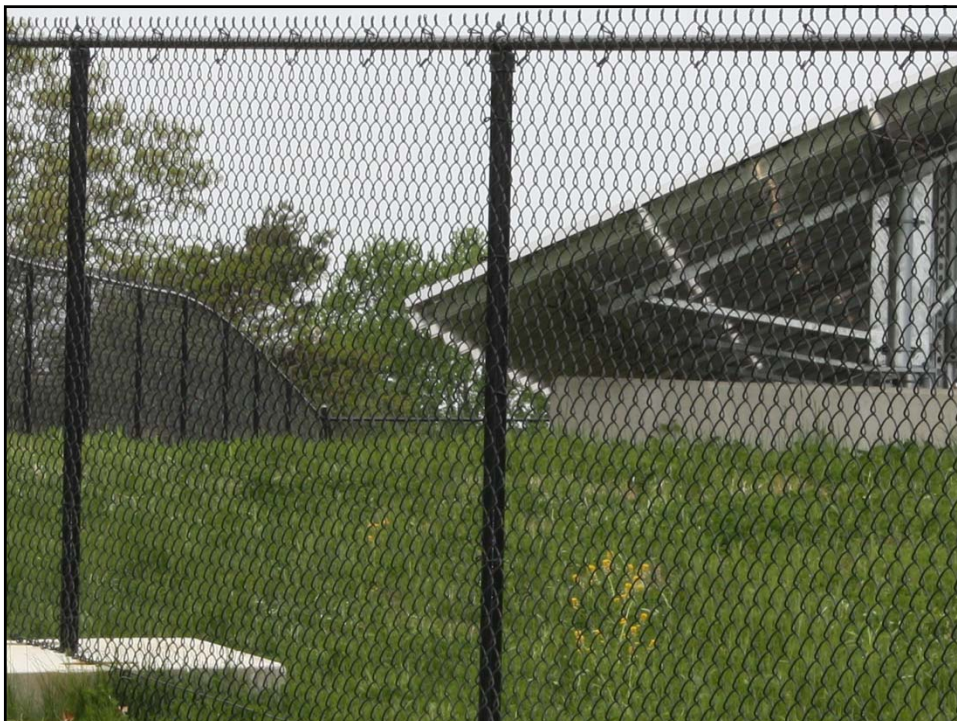
Car Canopy at REI





LANDFILL SOLAR







Landfill Materials

- street sweepings
- compost material
- street excavate materials

Key Advantages to City

- Requires no capital investment by the City
- Developer is responsible for O&M for term of contract
- City gets discounted electricity price
- City may get lease payments
- City reduces its carbon footprint
- Price hedging: when the electricity price increases the net metering credit increases.

Summary

- LANDFILL:
KW capacity (DC)= 1,250
kWh/yr= 1,613,241
- ROOFS AND CAR PORTS:
KW capacity (DC)= 1,429
kWh/yr=1,757,554
- TOTAL:
KW capacity=2,679
kWh/yr= 3,370,795
- VALUE: up to \$10 MILLION OVER 20 YEARS

Comparison

Newton electric use

kWh

FY 2015 22,795,000

Newton solar generation

Solar

kWh

Phase 1 927,000

Phase 2 3,370,000

4,297,000

% of 2015 19%

Community Meetings

1. October 15th- 7:00 pm, Shuman Center, 675 Saw Mill Brook Parkway
2. October 19th-6:30 pm, Depasquale's at Nightcaps Corner, intersection of Lexington St. and Rumford Ave.
3. October 22nd-7:00 pm, Upper Falls Community Center (Emerson), 5 High Street

This is what you see...



....from here.



This is what you see...



...from here.



This is what you see...



...from here.



PROPOSED SOLAR PROJECT RECAP

1. June 17, 2015: Public Facilities Committee hearing opened.
2. June 18, 2015: issue RFP for the development of solar at 13 City owned sites.
3. July 30, 2015: City receives responses to RFP.
4. October 13, 2015: the car ports and roofs project awarded to Ameresco.
5. October 15th – 22nd, 2015: three community meetings held.
6. November 2015: obtain authorization from Board of Aldermen for negotiation of leases.

7. Next steps:
 - Make final selection of developer for landfill project.
 - Complete the lease and Purchase Power Agreements.
 - Develop final design documents.
8. Roof and car ports will be constructed in spring/summer of 2016.
9. Landfill will be constructed in the fall of 2016.

NOTE: Federal ITC expires 12/31/2016.

KEY ADVANTAGES TO THE CITY

- Requires no capital investment by the City
- Developer is responsible for O&M for term of contract
- Developer disposes of landfill materials
- City gets discounted electricity price
- City may get lease payments
- City reduces its carbon footprint
- Price hedging: when the electricity price increases the net metering credit increases.

Appendix C- Newton Solar PV Sites (rev 6-15-15) - Phase 2

for more information go to the assessors web site at, <http://assessing.newtonma.gov/NewtonMAWebApp/>

LOCATION	PROJECT DESCRIPTION	JURISDICTION	COMMENTS
1 Dept of Public Buildings: 52 Elliot Street, 02461	roof mounted	Dept. of Public Buildings	Roof in fair condition
2 DPW: 60 Elliot Street, 02461	roof mounted and car ports	Dept. of Public Works	Roof condition TBD
3 DPW: 70 Elliot Street, 02461	truck ports, car ports and roof mounted	Dept. of Public Works	Roof in fair to poor condition.
4 Newton South High School: 140 Brandeis Rd, 02549	roof mounted	Dept. of Public Buildings	Roof may have structural limitations.
5 Library Parking lot : 330 Homer St, 02459	car ports	School Committee	
6 Landfill: Rumford Ave, 02466	car ports	Board of Trustees	
7 Angier School: 1697 Beacon St., 02468	ground mounted	Dept. of Public Works	under separate RFP
8 Oak Hill School: 130 Wheeler Rd, 02459	roof mounted	Dept. of Public Buildings	Bldg under construction. Opens in January 2016.
9 Lower Falls Com. Center : 545 Grove St, 02453	roof mounted	Dept. of Public Buildings	Roof in fair condition.
10 Bowen School: 280 Cypress St., 02459	roof mounted	Dept. of Public Buildings	New roof.
11 Fire Station 10 and wires Building: 755 Dedham St., 02459	roof mounted	Dept. of Public Buildings	South roof in good condition. North roof in fair to poor condition.
12 Zervas School (new construction): 30 Beethoven Avenue, 02469	roof mounted	Dept. of Public Buildings	New construction.
13 City Hall, 1000 Commonwealth Ave., 02459	car ports and roof mounted	Dept. of Public Buildings	To be built in 2016-17.
	roof mounted	Dept. of Public Buildings	Slate roof. Historical bldg.

Overall System Summary

Rooftop Solar PV Arrays	Square Footage of Panels	Capacity (kW DC)	System Production (kWh in year 1)
52 Elliot Street	2,357	35.34	43,382
60 Elliot Street	1,137	17.05	20,930
70 Elliot Street	5,107	76.57	93,995
Newton South High School	8,249	123.69	151,838
Angier Elementary School	5,500	82.46	101,225
Oak Hill Middle School	10,606	159.03	196,402
Lower Falls Community Center	3,143	47.12	57,843
Fire Station 10 & Wires Division	2,047	30.69	37,674
Zervas Elementary School	11,785	176.70	216,912
City Hall	1,489	22.32	29,391
Bowen Elementary School	4,714	70.68	86,765
Subtotal	105,194	788.64	970,103
Parking Lot Canopy Solar PV Arrays	Square Footage of Panels	Capacity (kW DC)	System Production (kWh in year 1)
60 Elliot	2,977	44.64	54,818
Newton South High School	25,895	388.27	476,796
Main Library	13,356	200.26	245,919
Subtotal	42,228	633.17	777,533
Total	148,500	1,429.89	1,757,554

System Components

Ameresco has exclusively installed polycrystalline modules from Tier I module manufacturers for our projects in Massachusetts. Ameresco only sources from Tier I suppliers to ensure the quality of the product as well as the longevity of the manufacturer to ensure the warranty can be upheld for the duration of its term. We have used the manufacturers below on past projects:

- **Solar Modules:** Canadian Solar, JA Solar, Yingli Solar, Hanwha SolarOne, Hyundai, or Trina Solar
- **Inverters:** Advanced Energy, Solectria, or PowerOne
- **Mounting System:** PanelClaw or Schletter for rooftops, Solaire Generation for canopies, and SolarFlex Rack or TerraSmart for ground mounts. The Panel Claw flat rooftop product (Polar Bear Gen III) includes resilient feet to protect the roof surface from damage, however Ameresco's costing for all flat roofs includes slip sheets at the points of contact or racking with roof material in case there is a compatibility or warranty issue with the material used.
- **Data Acquisition System:** Draker Laboratories, or PowerDash

Ameresco is vendor neutral. At this point Ameresco has not made a commitment or guarantee to use any specific equipment manufacturer for the City of Newton, though the equipment we currently plan on using for this proposal is provided in the table for each site below. Prior to construction, Ameresco will confirm vendor quotes and delivery schedules to select the Tier 1 manufacturer and procure the equipment that provides the most cost-effective and highest quality solar PV system to be installed at the proposed sites.

Preliminary Design Drawings, One-Line Diagrams can be found directly following this section. All Spec Sheets are available in the Appendices.

Summary

- LANDFILL:
 - KW capacity (DC)= 1,250
 - kWh/yr= 1,613,241
- ROOFS AND CAR PORTS:
 - KW capacity (DC)= 1,429
 - kWh/yr=1,757,554
- TOTAL:
 - KW capacity=2,679
 - kWh/yr= 3,370,795
- VALUE: up to \$10 MILLION OVER 20 YEARS

Comparison

<u>Newton electric use</u>	
	<u>kWh</u>
FY 2015	22,795,000
<u>Newton solar generation</u>	
<u>Solar</u>	<u>kWh</u>
Phase 1	927,000
Phase 2	3,370,000
	4,297,000
% of 2015	19%

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[Home](#) » Business Energy Investment Tax Credit (ITC)[< Back](#)**ELIGIBILITY**

Commercial,
 Industrial,
 Investor-Owned
 Utility,
 Cooperative
 Utilities,
 Agricultural

SAVINGS**CATEGORY**

Solar Water Heat,
 Solar Space Heat,
 Geothermal
 Electric,
 Solar Thermal
 Electric,
 Solar Thermal
 Process Heat,
 Solar Photovoltaics,
 Wind (All),
 Geothermal Heat
 Pumps,
 Municipal Solid
 Waste,
 Combined Heat &
 Power,
 Fuel Cells using
 Non-Renewable
 Fuels,
 Tidal,
 Wind (Small),

SECTOR NAME

Federal

ADMINISTRATOR

U.S. Internal Revenue Service

STATE

Federal

PROGRAM TYPE

Corporate Tax Credit

REBATE AMOUNT

30% for solar, fuel cells, small wind*
 10% for geothermal, microturbines and CHP

SUMMARY

Note: [IRS Notice 2015-4](#) included new certification requirements for small wind turbines placed in service after January 26, 2015. Small wind turbines must now meet the performance and quality standards set forth by either the American Wind Energy Association Small Wind Turbine Performance and Safety Standard 9.1-2009 (AWEA), or the International Electrotechnical Commission 61400-1, 61400-12, and 61400-11 (IEC)

The federal business energy investment tax credit available under 26 USC § 48 was expanded significantly by the Energy Improvement and Extension Act of 2008 (H.R. 1424), enacted in October 2008. This law extended the duration -- by eight years -- of the existing credits for solar energy, fuel cells and microturbines; increased the credit amount for fuel cells; established new credits for small wind-energy systems, geothermal heat pumps, and combined heat and power (CHP) systems; allowed utilities to use the credits; and allowed taxpayers to take the credit against the alternative minimum tax (AMT), subject to certain limitations. The credit was further expanded by the American Recovery and Reinvestment Act of 2009, enacted in February 2009.

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Geothermal Direct-Use,
Fuel Cells using Renewable Fuels,
Microturbines

In general, the following credits are available for eligible systems placed in service on or before December 31, 2016*:

**MAXIMUM
REBATE**

Fuel cells: \$1,500
per 0.5 kW

Microturbines: \$200
per kW

Small wind turbines
placed in service
10/4/08 - 12/31/08:
\$4,000

Small wind turbines
placed in service
after 12/31/08: no
limit

All other eligible
technologies: no limit

- **Solar.** The credit is equal to 30% of expenditures, with no maximum credit. Eligible solar energy property includes equipment that uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat. Hybrid solar lighting systems, which use solar energy to illuminate the inside of a structure using fiber-optic distributed sunlight, are eligible. Passive solar systems and solar pool-heating systems are not eligible.
- **Fuel Cells.** The credit is equal to 30% of expenditures, with no maximum credit. However, the credit for fuel cells is capped at \$1,500 per 0.5 kilowatt (kW) of capacity. Eligible property includes fuel cells with a minimum capacity of 0.5 kW that have an electricity-only generation efficiency of 30% or higher. (Note that the credit for property placed in service before October 4, 2008, is capped at \$500 per 0.5 kW.)
- **Small Wind Turbines.** The credit is equal to 30% of expenditures, with no maximum credit for small wind turbines placed in service after December 31, 2008. Eligible small wind property includes wind turbines up to 100 kW in capacity. (In general, the maximum credit is \$4,000 for eligible property placed in service after October 3, 2008, and before January 1, 2009. The American Recovery and Reinvestment Act of 2009 removed the \$4,000 maximum credit limit for small wind turbines.) Small wind turbines must meet the performance and quality standards set forth by either the American Wind Energy Association Small Wind Turbine Performance and Safety Standard 9.1-2009 (AWEA), or the International Electrotechnical Commission 61400-1, 61400-12, and 61400-11 (IEC)
- **Geothermal Systems.** The credit is equal to 10% of expenditures, with no maximum credit limit stated. Eligible geothermal energy property includes geothermal heat pumps and equipment used to produce, distribute or use energy derived from a geothermal deposit. For electricity produced by geothermal power, equipment qualifies only up to, but not including, the electric transmission stage. For geothermal heat pumps, this credit applies to eligible property placed in service after October 3, 2008. Note that the credit for geothermal property, with the exception of geothermal heat pumps, has no stated expiration date.
- **Microturbines.** The credit is equal to 10% of expenditures, with no maximum credit limit stated (explicitly). The credit for microturbines is capped at \$200 per kW of capacity. Eligible property includes microturbines up to two megawatts (MW) in capacity that have an electricity-only generation efficiency of 26% or higher.
- **Combined Heat and Power (CHP).** The credit is equal to 10% of expenditures, with no maximum limit stated. Eligible CHP property generally includes systems up to 50 MW in capacity that exceed 60% energy efficiency, subject to certain

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limitations and reductions for large systems. The efficiency requirement does not apply to CHP systems that use biomass for at least 90% of the system's energy source, but the credit may be reduced for less-efficient systems. This credit applies to eligible property placed in service after October 3, 2008.

In general, the original use of the equipment must begin with the taxpayer, or the system must be constructed by the taxpayer. The equipment must also meet any performance and quality standards in effect at the time the equipment is acquired. The energy property must be operational in the year in which the credit is first taken.

Significantly, the American Recovery and Reinvestment Act of 2009 repealed a previous restriction on the use of the credit for eligible projects also supported by "subsidized energy financing." For projects placed in service after December 31, 2008, this limitation no longer applies. Businesses that receive other incentives are advised to consult with a tax professional regarding how to calculate this federal tax credit.

** A number of changes to this credit are scheduled to take effect for systems placed in service after December 31, 2016. The credit for equipment that uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat will decrease from 30% to 10%. The credit for geothermal heat pumps, hybrid solar lighting, small wind, fuel cells, microturbines, and combined heat and power systems will expire. The credit amount for equipment which uses geothermal energy to produce electricity will remain at 10%.*

SOURCE

<http://programs.dsireusa.org/system/program/detail/658>

CAREERS & INTERNSHIPS

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CONTACT US

<

City of Newton



PUBLIC BUILDINGS DEPARTMENT

Josh Morse, Building Commissioner
Telephone (617) 796-1600
FAX (617) 796-1601
TTY: (617) 796-1608
52 ELLIOT STREET
NEWTON HIGHLANDS, MA 02461-1605

Setti D. Warren
Mayor

October 29, 2015

Public Facilities and Finance Committees
Newton City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459

Re: Summary of \$250,000 Mechanical & Interior Improvements at the Main Library, Docket Item # 284-15

The Public Buildings Department has prepared the following Summary of the Mechanical and Interior Improvements at the Main Library:

The existing Chiller, Cooling Tower and Associated Equipment is over 25 years of age and has reached the end of its useful life. Replacement parts for the existing Chiller, Cooling Tower and Associated Equipment are obsolete and no longer manufacture, making procuring replacement materials repairs to the equipment extremely difficult. The chiller was inoperative numerous times the past cooling season due to problems with the chiller's operating controls and major leaks in the chiller itself and related components. The department has spent over \$35,000 in the past few years repairing the chiller and related components. It is our intention to replace the existing chiller, the cooling tower and operating controls with a new state of the art chiller system. Air handlers in the building are also at the end of their useful life and a systematic replacement program started.

The restrooms in the Main Library are highly used due to the large volume of patrons visiting the library on a daily basis. As a result, the interior finishes in the restrooms of the building are beginning to show excessive wear and tear requiring upgrading. The current metal toilet partitions and doors are in poor condition and will be replaced with new partitions made of a phenolic material. This type of partition has been used for many years in the City's school buildings and has been highly durable as well as maintenance free. The current restroom floors will be replaced with a durable epoxy flooring system. Epoxy flooring is very easy to maintain. The overall quality and look of the restrooms will vastly improve with these upgrades.

Please see the below for the breakdown of costs:

Design	\$10,000
Chiller Replacement	\$96,500
Chiller Controls	\$20,500
Cooling Tower Repairs	\$13,500
Air Handler Replacement	\$44,500
Toilet Partition Replacement	\$17,500
Demo/wall repair to accommodate new partitions	\$13,000
Restroom Epoxy Flooring	\$22,500
Contingency	\$12,000

Should you have any questions regarding the above, please feel free to contact my office.

Sincerely,

Josh Morse
Public Buildings Commissioner

cc: Maureen Lemieux, Chief Financial Officer
Alex Valcarce, Deputy Commissioner
Dori Zaleznik, Chief Admin Officer



SETTI D. WARREN
MAYOR

City of Newton, Massachusetts
Office of the Mayor

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October 23, 2015

Honorable Board of Aldermen
Newton City Hall
1000 Commonwealth Avenue
Newton, MA 02459

Ladies and Gentlemen:

I write to request that your Honorable Board vote no action necessary on docket items #297-15 and 298-15. Per the attachment from the Comptroller, the requested transfers are no longer necessary as Water and Sewer Revenue are forecasted to generate more funds than anticipated in the FY16 Budget.

Thank you for your consideration of this matter.

Very truly yours,

Setti D. Warren
Mayor

RECEIVED
NEWTON CITY HALL
2015 OCT 26 PM 1:20
David A. Orsini, Clerk
Newton, MA 02459



CITY OF NEWTON, MASSACHUSETTS
WATER AND SEWER FUNDS
COMPARATIVE REVENUE BUDGET TO ACTUAL and REVENUE FORECAST
July 1, 2015 - September 30, 2015
(with comparative activity for the first three months of the three prior fiscal years)

	FY 2016		FY 2015		FY 2014		FY 2013	
	Budget	Actual	Budget	Actual	Actual	% Annual	Actual	% Annual
Stormwater Management Fund Revenue								
Stormwater Revenue (receipts less refunds)	\$ 1,950,000	\$ 384,875	\$ 1,791,115	\$ 179,115	\$ 197,420	25.20%	\$ 180,280	23.60%
Less: prior year accrual (1)								
Net Stormwater Fund Revenue	\$ 1,950,000	\$ 384,875	\$ 1,791,115	\$ 179,115	\$ 197,420	25.20%	\$ 180,280	23.32%

Projected - FY 2016 @ YTD & annualization of September collections for remaining 9 months of fiscal year (1):

\$ 1,827,583

	FY 2016		FY 2015		FY 2014		FY 2013	
	Budget	Actual	Budget	Actual	Actual	% Annual	Actual	% Annual
Sanitary Sewer Fund Revenue								
Sewer Fund Revenue (receipts less refunds)	\$ 30,490,166	\$ 8,662,132	\$ 8,191,869	\$ 819,186	\$ 7,761,308	26.07%	\$ 7,591,934	25.88%
Less: prior year accrual (1)								
Net Sewer Fund Revenue	\$ 30,490,166	\$ 8,662,132	\$ 8,191,869	\$ 819,186	\$ 7,761,308	26.07%	\$ 7,591,934	25.88%
Transfers from other Funds								
Net Sewer Fund	\$ 31,139,007	\$ 9,194,024	\$ 8,940,790	\$ 819,186	\$ 7,761,308	25.58%	\$ 8,281,687	27.58%

Projected - FY 2016 @ YTD & 9/30 Median collection rate for three prior years

\$ 31,939,714

	FY 2016		FY 2015		FY 2014		FY 2013	
	Budget	Actual	Budget	Actual	Actual	% Annual	Actual	% Annual
Water Fund Revenue								
Water Fund Revenue (receipts less refunds)	\$ 23,875,000	\$ 6,392,551	\$ 5,710,594	\$ 571,059	\$ 5,444,609	26.01%	\$ 5,360,185	26.19%
Less: prior year accrual (1)								
Net Water Fund	\$ 23,875,000	\$ 6,392,551	\$ 5,710,594	\$ 571,059	\$ 5,444,609	26.01%	\$ 5,360,185	26.19%

Projected - FY 2016 @ YTD & 9/30 Median collection rate for three prior years.

\$ 24,410,988

(1) Stormwater revenue for remaining 9 months of the fiscal year are forecasted based upon September actual collections, which is the first full month's collections at the FY 2016 new stormwater rates.