IN BOARD OF ALDERMEN

FINANCE COMMITTEE REPORT

Monday, September 10, 2012

Present: Ald. Gentile (Chairman), Ciccone, Linsky, Salvucci, Rice, Blazar, Fuller, and Lappin;

also present: Ald. Crossley

City officials present: Bob DeRubeis (Commissioner of Parks and Recreation), David Turocy (Commissioner of Public Works), Lou Taverna (City Engineer), Fred Russell (Utilities Director), John Lojeck (Commissioner of Inspectional Services), Robert Rooney (Commissioner of Public Works)

#103-12(2) <u>HIS HONOR THE MAYOR</u> requesting authorization to transfer the sum of

seventy-five thousand dollars (\$75,000) from Forestry Services Full Time Salaries to Forestry Services – Forestry Services – Forestry/Tree Services. [08/23/12 @

4:34 PM]

ACTION: APPROVED 8-0

NOTE: Parks and Recreation Commissioner Bob DeRubeis presented the request for a transfer of funds from a salary line item to a contractual line item. The Commissioner would like to contract with a tree removal company for approximately 36 days to begin removing some of the 460 dead trees in the City. The contractor would use the City's equipment for the removals, which reduces the cost from \$365 an hour to \$255 per hour. The dead trees pose a hazard for pedestrians, vehicles and buildings; therefore, the City needs to remove the dead trees posthaste.

The funds to be transferred are a portion of the salaries set aside for the new three-person tree crew created as part of the Fiscal Year 2013 Budget. The Commissioner has encountered difficulty hiring a crew due to the proposed salary and union issues related to increasing salary. The positions have been graded as R9 and the Administration's current policy is to hire employees at Step 1 of a grade. In this case, the Administration is proposing to hire the tree crew at a Step 3 or 4 to ensure that qualified applicants are hired.

The union is taking issue with that proposal and would like to bargain with the City. The City has gone to the union with proposals and the union has responded with their own proposals. The City and union have yet to reach middle ground on the issue but they are working to resolve the issue. The Commissioner believes that the City can get experienced, qualified individuals for the tree crew with a salary of \$50,000 per year. The Commissioner is hopeful that the tree crew will be hired by mid-October. Should someone be hire while the tree contractor is working in the City, that person can work with the contractor. Chief Financial Officer Maureen Lemieux and Commissioner DeRubeis assured the Committee that they would keep them apprised of the negotiations.

Committee members asked if it was possible to hire the tree contractor now instead of waiting for the legislative process to be completed. Maureen Lemieux responded that it would

be possible to fund the contract immediately with funds available in the Parks and Recreation Department's budget. There is currently no tree removal work being done in the City except on an emergency basis. It was also pointed out that the replacement rate for dead trees is five removals to one replacement. The Commissioner stated that one of the things that he is looking at is using the savings generated by the new three-person tree crew to increase the replacement ratio. With that, Ald. Lappin moved approval

#250-12 <u>HIS HONOR THE MAYOR</u> requesting authorization to transfer the sum of eleven thousand seven hundred sixty dollars (\$11,760) from Current Year Budget Reserve to Clerk of the board Full Time Salaries for the purpose of funding an

Reserve to Clerk of the board Full Time Salaries for the purpose of funding an adjustment to the salary of the City Clerk/Clerk of the Board. [08/06/12 @ 3:26]

PM]

ACTION: APPROVED 8-0

NOTE: Chief Financial Officer Maureen Lemieux presented the request to transfer \$11,760 from the budget reserve to the salary line item in the City Clerk/Clerk of the Board Department budget to fund the increase to the City Clerk/Clerk of the Board's salary approved by the Board of Aldermen in August 2012. The Committee had no questions regarding the item and Ald. Lappin moved approval, which carried unanimously.

REFERRED TO PUBLIC FACILITIES AND FINANCE COMMITTEES

#255-12 <u>HIS HONOR THE MAYOR</u> requesting authorization to appropriate the sum of

two million seven hundred thousand dollars (\$2,700,000) from bonded indebtedness for the purpose of funding the design and construction of 9,500 linear feet of hydraulically deficient water main pipe in Washington Street from

Church Street to Chestnut Street. [08/06/12 @ 3:25 PM]

PUBLIC FACILITIES APPROVED 7-0-1 (Gentile abstaining) on 09/05/12

ACTION: APPROVED 8-0

NOTE: Director of Utilities Fred Russell presented the request for \$2.7 million to clean and line 9,500 linear feet of unlined cast iron water main in Washington Street from Newton Corner to West Newton. The project is part of the 10-year capital improvement plan for the City's water infrastructure that was presented to the Board of Aldermen in February 2012 and included in the Fiscal Year 2013 Capital Improvement Plan. The unlined pipe is hydraulically deficient and does not meet the current International Organization for Standardization (ISO) fire flow standards making it the top priority for improvements. The cleaning and lining would enhance fire flow to meet the standards and improve water quality in the area. Mr. Russell added that the capital plan includes \$2.7 million per year from bonded indebtedness for the next three years to address fire flow and hydraulic deficiencies in water mains.

The cleaning and relining would not require a full trenching of Washington Street but would require six or seven pits be dug in Washington Street to access the pipe. There was concern regarding the patching of the pits, as parts of Washington Street were recently repaved. Mr. Russell explained that he plans to require that the contractor use flowable fill and provide

level, seamless patches. The requirements for the patches would be detailed on the City's street opening permit.

The project will be designed in the winter and is anticipated to begin in the spring. Ald. Lappin moved approval of the item, which carried unanimously.

#251-12 HIS HONOR THE MAYOR requesting authorization to increase the authorized

number of Full Time Equivalent (FTE) positions in the Planning and Development by .2 FTEs and to transfer the sum of fifteen thousand dollars (\$15,000) from Current Year Budget Reserve to Planning Part Time Salaries for the purpose of funding additional hours for part time staffing to assist in the

completion of the Recreation and Open Space Plan. [08/06/12 @ 3:26 PM]

ACTION: APPROVED 8-0

NOTE: The item is a request to transfer money from budget reserve to the Planning Department's part-time salary account and to increase the positions in the Planning and Development Department by .2. The money would be used to fund additional hours for an existing part time staff person to complete the Recreation and Open Space Plan. The Planning Department anticipated that the work would be completed by June 30, 2012; therefore, the position was not funded in the Fiscal Year 2013 budget. However due to the length of the public comment period and conflicts in scheduling meetings, the plan was not completed.

It would be beneficial to continue employing the person until the plan is completed for continuity's sake, as he is familiar with the process and the plan development. It would also allow existing staff to focus on other initiatives within the department. The plan is expected to be completed in the near future; therefore, the entire \$15,000 may not be required. Any unused funds would be returned to the budget reserve. Ald. Lappin moved approval of the item, which carried unanimously.

#252-12 <u>HIS HONOR THE MAYOR</u> requesting authorization to transfer the sum of thirty

thousand dollars (\$30,000) from Current Year Budget Reserve to Planning Part Time Salaries for the purpose of funding additional hours for staffing to assist in the completion of work required on a variety of active projects. [08/06/12 @ 3:25]

PM] [08/06/12 @ 3:25 PM]

ACTION: APPROVED 8-0

NOTE: Maureen Lemieux presented the request to transfer \$30,000 from budget reserve to the Planning Department's part-time salaries account. The Director of Planning and Development would like to increase the hours for part-time staff for additional work on a variety of Planning Department projects, such as the Austin Street Parking Lot, the Riverside Project, and increased parking in Newton Centre.

The Director of Planning has not determined how she will divide the additional hours between the two part time staff members. The work could be split equally between the two employees or the hours could be increased for one of the employees. If either or both employees become eligible for health care benefits, it can be funded through attrition this fiscal year and accounted for in the next budget.

Committee members asked if it was more beneficial to hire a part-time person or a consultant. Ms. Lemieux responded that she believes the City gets greater value from an employee rather than a consultant. With that, Ald. Linsky moved approval, which carried by a vote of eight in favor and none opposed.

#253-12 <u>HIS HONOR THE MAYOR</u> requesting authorization to increase the authorized

number of Full Time Equivalent (FTE) positions in the Inspectional Services Department by .5 FTEs and to transfer the sum of twenty five thousand dollars (\$25,000) from Current Year Budget Reserve to Inspectional Services Admin Part

Time Salaries for the purpose of funding a part-time ADA/Section 504

Accessibility Coordinator position for the remainder of the fiscal year. [08/06/12]

@ 3:25 PM]

ACTION: APPROVED 8-0

NOTE: Commissioner of Inspectional Services John Lojack explained that this is a request to provide funding for and to add a part-time position in his department. The City is required to have an ADA/Section 504 Officer as it receives federal funds. The new position would be an Accessibility Coordinator to meet that requirement, staff the Commission on Disabilities, address items contained in the action plan developed by the Fair Housing Committee and items in the Ramping Up: Planning for a More Accessible Newton Report. The attached job description provides further details on the primary responsibilities of the position.

The Inspectional Services Department is currently staffing the Commission on Disability but does not have enough staff to continue to dedicate personnel. The Commissioner would also like to hire someone with expertise in disability laws and regulations to ensure the City's compliance with ABA and ADA requirements. It was put forward that the person might also need some expertise in what type of accessibility projects are applicable for Community Preservation Funds.

The Commissioner added that although the request is for a part-time position, it might be determined that a full-time position is required to address all the responsibilities of the position. The hope is to possibly fund a full-time position with funds generated as a result of the recent increase in handicap parking violations. Committee members suggested that for now the Commissioner might want to talk with neighboring communities to determine whether there was a possibility of sharing the position between Newton and two or more communities. There were no further questions or comments and Ald. Rice moved approval. The motion carried by a vote of eight in favor and none opposed.

#205-12 <u>HIS HONOR THE MAYOR</u> requesting an amendment to the F.A. Day Middle

School Construction Project Appropriation Schedule included in Board Order #115-12 approved June 18, 2012 by reducing the amount of thirty-five thousand three hundred thirty-four dollars (\$35,334) from the appropriation for "General Contractor" and adding that sum to the "Undistributed Project Budget."

[07/02/12 @ 5:03 PM]

ACTION: HELD 8-0

<u>NOTE</u>: Chief Financial Officer Maureen Lemieux requested that the Committee hold the item without discussion, as the Public Buildings Department is not ready to proceed with discussion. Ald. Lappin moved hold, which carried unanimously.

#56-07(4) <u>HIS HONOR THE MAYOR</u> requesting an amendment to the Newton North High

School New Construction Project Appropriation Schedule included in Board Order #56-07(2) approved April 22, 2008 to reflect the final cost of the project.

[07/02/12 @ 5:03 PM]

ACTION: HELD 8-0

NOTE: The Chairmen asked the Committee to hold the item, as he was unable to attend a recent meeting related to the Newton North Project close out. The Chairman would like to be very comfortable with the numbers related to the final cost of the project before it is presented to the Committee. He expects to hold a special meeting before the Board of Aldermen meeting on September 19, 2012. Ald. Lappin moved hold, which carried unanimously.

REFERRED TO ZONING & PLANNING AND FINANCE COMMITTEES

#79-12 <u>COMMUNITY PRESERVATION COMMITTEE</u> recommending the

appropriation of nine hundred thirty eight thousand sixty-three dollars (\$938,063) to the Planning & Development Department for the creation of seven units of affordable rental housing at 12 and 18-20 Curve Street, West Newton, as described in the proposal submitted by Myrtle Village, LLC. [03/01/12 @ 5:00

PM]

ZAP VOTED NO ACTION NECESSARY 5-0 on 08/16/12

ACTION: NO ACTION NECESSARY 8-0

NOTE: One of the managing partners in the project has a conflict of interest, which has resulted in a one-year moratorium before the project can proceed. Therefore, the Committee unanimously approved a motion of no action necessary.

REFERRED TO PUBLIC FACILITIES AND FINANCE COMMITTEES

#197-12 <u>HIS HONOR THE MAYOR</u> requesting the Board of Aldermen authorize a long-term lease with the solar photovoltaic firm, Ameresco Solar Inc., to allow for the

installation of solar panels on the rooftops of five (5) public schools: Newton North High School, Brown Middle School, Memorial-Spaulding Elementary School, Countryside Elementary School and Bowen Elementary School.

[07/02/12 @ 5:03 PM]

PUBLIC FACILITIES APPROVED 7-0-1 (Gentile abstaining) on 09/05/12

ACTION: APPROVED 4-0-3 (Fuller, Gentile, Linsky abstaining; Salvucci not voting)

<u>NOTE</u>: Please refer to the attached PowerPoint presentation and the September 5, 2012 Public Facilities Committee Report for the information presented to the Finance Committee and additional materials. Chief Operating Officer Robert Rooney, Assistant City Solicitor Alan Mandl and representatives of Ameresco joined the Committee for discussion of the item.

FINANCE COMMITTEE REPORT

Monday, September 10, 2012

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The State has set a goal of a statewide generation of 250 megawatts of renewable energy by 2017. In order to reach that goal the state and federal Government have put financial incentives in place to make these types of projects feasible for cities and towns. The project is economically advantageous for both the City and Ameresco. As a municipality, the City cannot take advantage of tax incentives related to solar panels and would be required to invest in the proposed solar panels. If the City enters into an agreement with a third party to install and maintain the panels, the City saves money and provides green energy. Jim Walker of Ameresco pointed out that there is no capital outlay for this project or operation and maintenance to fund. Three twenty year scenarios were provided to the Committee, as part of the agenda materials. The scenarios are available online as part of the September 10, 2012 agenda located on the Finance Committee page. Committee members requested that Ameresco provide a scenario of the financials for twenty years if there is a decrease in the electric rates. Chief Administrative Officer Robert Rooney has the modeling software to provide that type of scenario to the Board.

During discussion at the Public Facilities Committee meeting there were questions regarding the weight bearing capacity of the Newton North High School Roof and the weight of the solar panels. Mr. Walker provided information that the combined weight of the solar panels proposed for the high school is 109,005 pounds. Mr. Rooney has spoken with Dorr and Whittier Architects and the Inspection Services Commissioner and they will review the independent structural engineer's review of the high school roof. The Commissioner of Inspectional Services John Lojeck stated that the roof is designed to bear the additional weight with plenty of excess capacity for snow. The solar arrays and other equipment on the roof will bring the weight on the roof to 4 pounds per square foot, which is within current code requirements. Jim Walker added that Ameresco cannot void the warranty of the roof and overloading the roof would be a violation. In addition, Ameresco does an annual inspection of their panels and electronically monitors them to ensure that there are no problems.

Ameresco pays the manufacture of each proposed building's roof to audit the roof and provide a list of what needs to be done to keep the warranty intact. In addition, Ameresco will also be providing the City with 100% drawings for each building that are stamped by an independent structural engineer. Ameresco would not include the high school in the project, if there were any question of the soundness of the roof.

The Chairman pointed out that the City had to remove snow on the Newton North High School roof in 2011 due to concerns about the weight of the snow particularly over the gym area. The Chair would be more comfortable if there were further analysis of the high school roof and asked what the cost of a peer review of the structural engineer's analysis would cost. The cost is approximately \$4,000. The Chair suggested that Ameresco consider paying for a peer review of the structural analysis. Mr. Walker explained that snow does not form in substantial amounts on the solar arrays due to the heat absorbed by the arrays.

There was some concern raised regarding whether the City or School Department would receive the net metering credits. If the City is going to pay the bill for the electricity generated by Ameresco, it should get the credits as well. Chief Financial Officer Maureen Lemieux will speak with the Sandra Guryan Deputy Superintendent of Schools/Chief Administrative Officer

FINANCE COMMITTEE REPORT

Monday, September 10, 2012

Page 7

regarding the metering. Comptroller David Wilkinson added that language should be included in the Board Order detailing what entity would be paying Ameresco and receiving the net metering credit.

One of the Committee members asked if there were protections for the City if Ameresco goes bankrupt. Mr. Mandl explained that there is not much protection but if the project is generating revenue, it is likely that the bankruptcy court would reject the contract between the City and Ameresco. In addition, the City can buy out of its contract in six years, if there are concerns.

Ald. Lappin moved approval as the project stands to save the City a little money and provide clean energy. The motion carried by a vote of four in favor, none opposed, and three abstentions. Ald. Gentile abstained to hear whether Ameresco would be willing to fund a peer review, Ald. Fuller and Linsky abstained in order to further review provided materials and the requested scenario of the financials for twenty years if there is a decrease in the electric rates.

The Committee adjourned at 10:20 p.m. and all other items before the Committee were held without discussion. Draft Board Orders for the above items are attached.

Respectfully submitted,

Leonard J. Gentile, Chairman

IN BOARD OF ALDERMEN

2012

ORDERED:

That, in accordance with the recommendation of the Finance Committee through its Chairman Alderman Leonard J. Gentile, the transfer of the sum of seventy-five thousand dollars (\$75,000) from Forestry Services Full Time Salaries to Forestry – Services Forestry/Tree Services for the purpose of contracting for tree removal services is hereby approved as follows:

FROM: Forestry Services – Full Time Salaries (01602011-511001)......\$75,000

TO: Forestry Services – Forestry/Tree Services

(01602011-5243).....\$75,000

Under Suspension of Rules Readings Waived and Approved

(SGD) DAVID A. OLSON City Clerk

(SGD)	SETTI D. WARREN
	Mayor

_		
Date:		
Date		

IN BOARD OF ALDERMEN

2012

ORDERED:

That, in accordance with the recommendation of the Finance Committee through its Chairman Alderman Leonard J. Gentile, the transfer of the sum of eleven thousand seven hundred sixty dollars (\$11,760) from Current Year Budget Reserve to Clerk of the Board – Full Time Salaries for the purpose of for the purpose of funding an adjustment to the City Clerk/Clerk of the Board's salary hereby approved as follows:

FROM: Budget Reserve (0110498-5790).....\$11,760

TO: Forestry Services – Forestry/Tree Services (0110101-511001).....\$11,760

Under Suspension of Rules Readings Waived and Approved

(SGD) DAVID A. OLSON
City Clerk
(SGD) SETTI D. WARREN
Mayor

T		
I lata:		
Date:		

IN BOARD OF ALDERMEN

, 2012

ORDERED:

That for purposes of funding the design, lining and improvement of 9,500 linear feet of water main pipe in Washington Street there be and hereby is appropriated and authorized to be borrowed under and pursuant to Chapter 44, Section 8 (5) of the General Laws, as amended and supplemented, or any other enabling authority, the sum of two million seven hundred thousand dollars (\$2,700,000).

Under Suspension of Rules Readings Waived and Approved

(SGD) DAVID A. OLSON City Clerk (SGD) SETTI D. WARREN Mayor

Date		

IN BOARD OF ALDERMEN

September 15, 2008

ORDERED:

That, in accordance with the recommendation of the Finance Committee through its Chairman Alderman Leonard J. Gentile,, authorization be and is hereby approved to increase the authorized number of Full Time Equivalent (FTE) positions in the Planning and Development Department by 0.2 FTE and that the transfer of the sum of fifteen thousand dollars (\$15,000) from Current Year Budget Reserve to Planning Part Time Salaries for the purpose of funding the additional position is hereby approved as follows:

Under Suspension of Rules Readings Waived and Adopted

(SGD) DAVID A. OLSON	(SGD) SETTI D. WARREI
City Clerk	Mayor
	Date:
	Date.

IN BOARD OF ALDERMEN

September 15, 2008

ORDERED:

That, in accordance with the recommendation of the Finance Committee through its Chairman Alderman Leonard J. Gentile,, authorization be and is hereby approved to increase the authorized number of Full Time Equivalent (FTE) positions in the Planning and Development Department by 0.5 FTE and that the transfer of the sum of thirty thousand dollars (\$30,000) from Current Year Budget Reserve to Planning Part Time Salaries for the purpose of funding additional hours for staffing is hereby approved as follows:

FROM: Budget Reserve (0110498-5790)......\$30,000

TO: Planning Salaries (0111401-511102).....\$30,000

Under Suspension of Rules Readings Waived and Adopted

(SGD) DAVID A. OLSON	(SGD) SETTI D. WARREN
City Clerk	Mayor
	Date:
	Date

TOWN OR NED A TOWN 18		
Division/Department		
Location City H	all	
Job Title ADA/S	ection 504 Accessibility Coordinator	
Reports to		Title
Level/Grade	Type of position:	Hours19 / week
Salary Range	☐ Full-time ☐ Part-time	☐ Exempt ☐ Nonexempt
	Contractor Intern	
GENERAL DESCRIPTION		
non-discrimination based on disa procedures, including but not lim Rehabilitation Act (1973) as amer Governor's Model Employer Programary Responsibilities: Serve as the primary resour departments. Provide staff support to the Responsible for the develop compliance with federal mae. Work with and provide tech mitigate and eliminate any programs, activities, and see in compliance with all state. Develop and maintain a comadministrative requirement. Act as point person for person accommodations and estable and Federal disability-related.	bility under federal, Massachusetts and ited to the Americans with Disabilities Anded, Fair Housing Act (1968), as amend ram, and Administration and Finance Acce within the City of Newton to provide Newton Commission on Disability and coment, implementation and monitoring of Indates. Inical assistance to all the departments in barriers preventing physical or community in the City of Newton facilities included and federal regulations. In prehensive monitoring and evaluation is of the state and federal disability civil is ons with questions relating to disability lish any internal procedures needed for it of the state and regulations.	disability-related technical assistance to City other relevant committees. of the City of Newton's Section 504 plan and ADA plan in on the City of Newton and executive offices to identify, ication access, on an equal basis, to the various public luding, but not limited to, meetings and public hearings, program to ensure compliance with the substantive and
WORK EXPERIENCE REQUIRE	MENTS	
 law relating to persons with Knowledge of evaluating pu Experienced trainer on disa Familiarity with disability ac 	a disability. blic access to facilities and programs and bility issues lvocacy & service network. I customer service skills, working with stormunication skills.	DA), Sec. 504, UFAS, MAAB regulations, and fair housing d services. aff, the public and elected officials is a required.

Bachelor's degree in related field or equivalent or advanced vocational skills supplemented by several years of progressive professional/technical development on the job.
 REVIEWED BY
 Title

 DATE POSTED

EDUCATION REQUIREMENTS

Division/Departmen	t	#253-12
Location	City Hall	
Job Title	ADA/Section 504 Accessibility Coordinator	
Reports to	Title	
DATE HIRED		

<u>CITY OF NEWTON</u>

IN BOARD OF ALDERMEN

September 15, 2008

ORDERED:

That, in accordance with the recommendation of the Finance Committee through its Chairman Alderman Leonard J. Gentile,, authorization be and is hereby approved to increase the authorized number of Full Time Equivalent (FTE) positions in the Inspectional Services Department by 0.5 FTE and that the transfer of the sum of twenty-five thousand dollars (\$25,000) from Current Year Budget Reserve to Inspectional Services Admin Part Time Salaries for the purpose of funding the new ADA/Section 504 Accessibility Coordinator position is hereby approved as follows:

FROM:	Budget Reserve (0110498-5790)	\$25,000
TO:	ISD Salaries (0122001-511102)	\$25,000
Jnder Suspension of Rules		

Readings Waived and Adopted

(SGD) DAVID A. OLSON
City Clerk

(SGD) SETTI D. WARREN
Mayor

Date: ______

IN BOARD OF ALDERMEN

, 2012

ORDERED:

That, in accordance with the recommendation of the Zoning & Planning Committee through its Chairman Marcia Johnson and the Finance Committee through its Chairman Leonard J. Gentile, the following item be and is hereby voted NO ACTION NECESSARY:

REFERRED TO ZONING & PLANNING AND FINANCE COMMITTEES

#79-12 COMMUNITY PRESERVATION COMMITTEE recommending the appropriation of nine hundred thirty eight thousand sixty-three dollars (\$938,063) to the Planning & Development Department for the creation of seven units of affordable rental housing at 12 and 18-20 Curve Street, West Newton, as described in the proposal submitted by Myrtle Village, LLC. [

Under Suspension of Rules Readings Waived and Item Voted NO ACTION NECESSARY

(SGD) DAVID A. OLSON, City Clerk

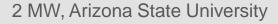


Ameresco

Solar PV for the City of Newton, MA



210 kW, Hill AFB, Utah





Topics

1. Ameresco

- 2. Construction Steps
- 3. Solar PV Projects for Newton
- 4. Project Financials
- 5. Discussion





Ameresco: Company Overview



and 5 provinces

- Leading independent energy efficiency and renewable energy company throughout North America
- 2000: year incorporated
- 2010: year went public on NYSE
- \$728.2 million: 2011 Revenue
- \$3 Billion: constructed projects
- 900+: employees
- Corporate Headquarters in Framingham, MA



Ameresco: Award-Winning Expertise











AWARD • 2012

Ranked #49 on Top 150

Public Companies in Massachusetts

AMERESCO, INC.

Boston Business Journal



Climate Change
Business Journal
Business Achievement
Award, Growth 2010
Silver Medal





Ameresco: Building Solar PV on Schools in MA



Newburyport, MA: 502 kW 2 Schools and DPW Bldg.



Lowell, MA: 348 kW 4 Schools and LMA



Waltham, MA: 1,931 kW 6 Schools and Muni Center.



Natick, MA: 1,058 kW 5 Schools and Senior Center.



Fall River, MA: 576 kW 3 Schools and Water Treatment



Milton Academy: 192 kW Student Activity Center



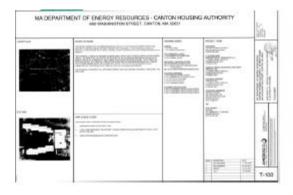
Topics

- 1. Ameresco
- 2. Construction Steps
- 3. Solar PV Projects for Newton
- 4. Project Financials
- 5. Discussion





Construction Steps



Design & Permitting

Mobilization & Crane Ops

Ballast Layout



Panel Assembly & Wiring



Inverter Installation



Commissioning & Witness Test



Additional Structural and Roof Warranty Approvals



Building Owner

Letter of Compliance - Photovoltaic Installation on Carlisle Warranted Roof

This memo outlines Carlisle's recommendations concerning the installation of Photovoltaic (PV) systems over a Carlisle warranted roofing system in order to facilitate the installation of the PV system with limited disturbance to the Carlisle roofing system. The determination of the most suitable PV technology, racking and installation method is the responsibility of the Building Owner or its designated representative. Listed below are the recommendations along with conditions that may impact the Carlisle warranty.

Please note that this list is not an exhaustive one:

- 1. Determine the building's structural ability to withstand the PV system.
- 2. The roofing system should be protected during installation of the PV system to prevent damage. This includes the staging and assembly areas and other areas heavily traveled.
- 3. To avoid PV system removal costs to the building owner, the PV system should provide adequate clearance for access to the roof membrane should maintenance or repair be required.
- 4. Field seams that may be concealed by the PV system, and therefore harder to access, should be overlaid by a Carlisle authorized roofing applicator using approved details and products.
- 5. For non-penetrating PV racking systems, a protection course consisting of Carlisle's Pressure-Sensitive Molded Walkway Pads is recommended between the PV support system and the roofing membrane. Walkway pads of thickness and density equal or greater to those which can be provided by Carlisle SynTec may be used to prevent damage to the roofing membrane.
- 6. PV laminates must not be adhered directly to the Carlisle primary membrane. A compatible Carlisle membrane shall be used as a slip sheet and spliced to existing membrane.
- 7. Racking systems that require penetration of the roofing membrane must be flashed in accordance with the appropriate Carlisle published detail. All flashing details must be performed by a Carlisle authorized roofing applicator

It is recommended that areas frequently accessed for the purpose of operation or maintenance of the PV system be protected by walkways installed in accordance with the Carlisle published specifications and details. Should Carlisle be contacted to investigate a warranty claim, or to make warranty related repairs, providing access to the membrane (removal and replacement of the PV System) is the responsibility of the Building Owner

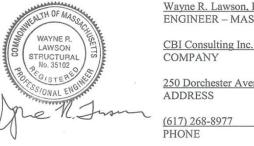
The following table lists the roofing inspections during the PV system installation to ensure continuation of the Carlisle warranty. Upon completion of the roof alteration, an inspection must be scheduled and performed by a Carlisle Field Services Representative.

STRUCTURAL FINAL AFFIDAVIT

To the Commissioner, Town of Canton, MA,

I certify that I, or my authorized representative, have inspected the work associated with Permit No. B-11-729, issued November 22, 2011, located at 660 Washington Street on the dates used below or on at least One (1) occasions during construction, and that to the best of my knowledge, information, and belief the work has been done in conformance with the permit and plans approved by the Inspectional Services Department and with the provisions of the Massachusetts State Building Code, 780 CMR and all other applicable laws, regulations, statutes, and ordinances.

- Ballast weight agrees with design
- Attached system installed per design



Wayne R. Lawson, P.E., SECB 35102 ENGINEER - MASS REG. NO.

250 Dorchester Avenue, Boston, MA 02127

Inspection Dates:

December 13.

Then personally appeared the above-named WAYNE R. LAWSON and made oath that the above statement by him is true.

Commission expires



Topics

- 1. Ameresco
- 2. Construction Steps
- 3. Solar PV Projects for Newton
- 4. Project Financials
- 5. Discussion





Project Summary

Site	kW	kWh (Year 1)
Newton North High School	262	299,900
Brown Middle School	253	298,000
Memorial Spaulding Elementary School	109	128,600
Countryside Elementary School	62	74,500
TOTAL	686	801,000



11

Newton North High School (262 kW)





Brown Middle School (253 kW)





Memorial Spaulding Elementary School (109 kW)





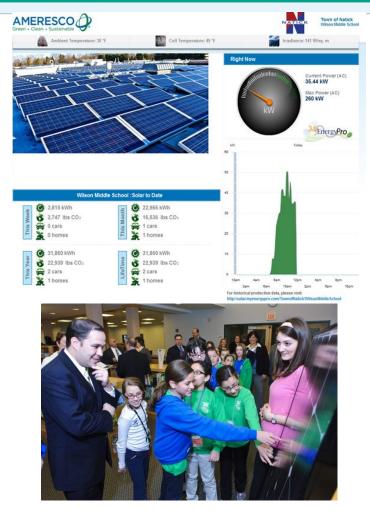
Countryside Elementary School (62 kW)





Educational Program: Online Data & Teacher Curriculum

- 15 Solar PV Topics for K-12:
 - Renewable energy fundamentals
 - Solar PV design considerations
 - Data analysis
- Teacher topic summaries
- Topics matched with MA Learning Standards for Science and Technology/Engineering Frameworks
- Curricula accessible online



Middle school students showing solar panel to Mayor William A. Flanagan of Fall River



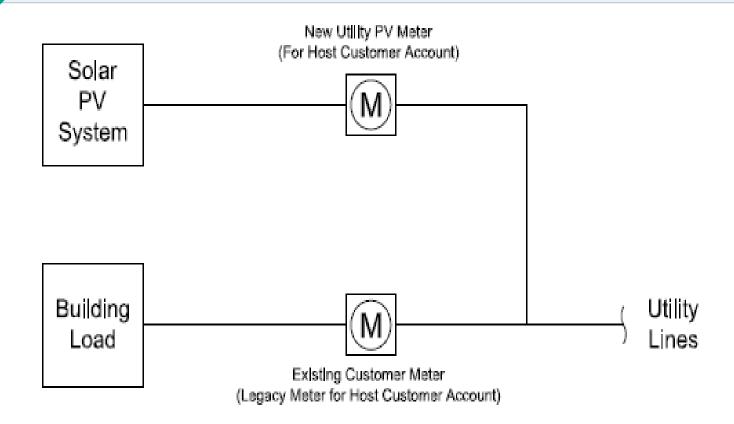
Topics

- 1. Ameresco
- 2. Construction Process
- 3. Solar PV Projects for Newton
- 4. Project Financials
- 5. Discussion





Net Metering Provides Additional Energy Savings



Connecting Solar PV Behind New Customer Meter



Solar PV Energy Savings (\$/kWh)

	HS	ES	& MS	
NSTAR kWh Rate + Newton Supply	\$ 0.083	\$	0.100	
Plus Ameresco PPA Price (Year 1)*	\$ 0.106	\$	0.106	
Total Rate Payments	\$ 0.189	\$	0.206	
Less: Net Metering Credit	\$ 0.176	\$	0.175	
Net Electricity Rate (\$/kWh)	\$ 0.013	\$	0.030	**
Electricity Rate Savings	\$ 0.070	\$	0.069	

^{* 2.5%} annual price escalator; ** Rounding



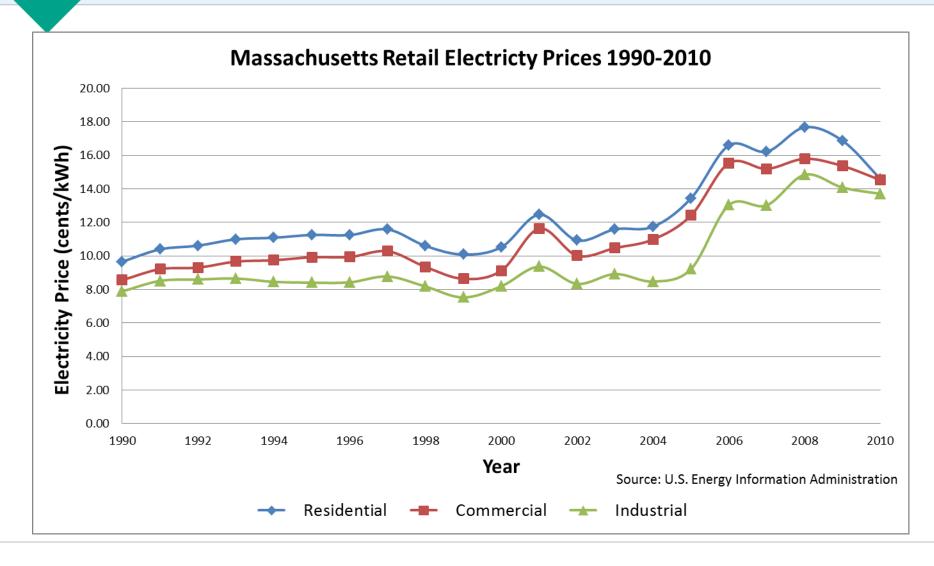
19

Solar PV 20-Year Electricity Cost Savings

Utility Rate Escalator Scenarios	High School		nentary and Idle Schools	Total
3.5%	\$	858,964	\$ 1,429,101	\$ 2,288,065
2.5%	\$	724,289	\$ 1,204,663	\$ 1,928,952
0.0%	\$	450,809	\$ 748,904	\$ 1,199,713



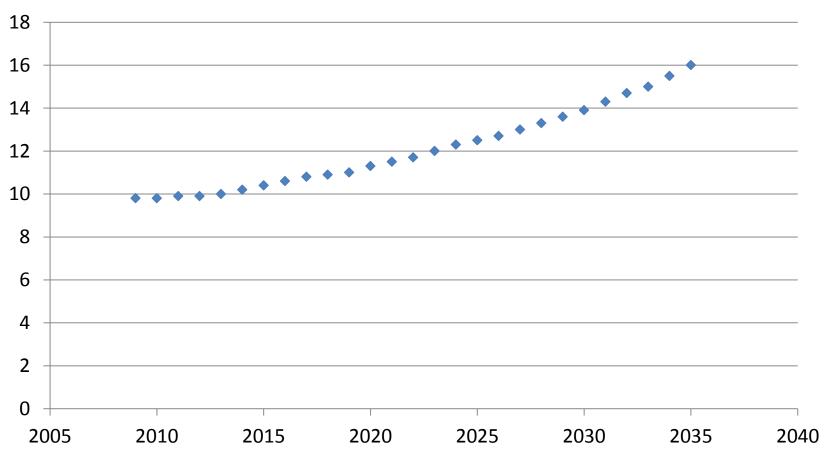
EIA: Retail Utility Rates Have Increased 3.5%/Year since 1990





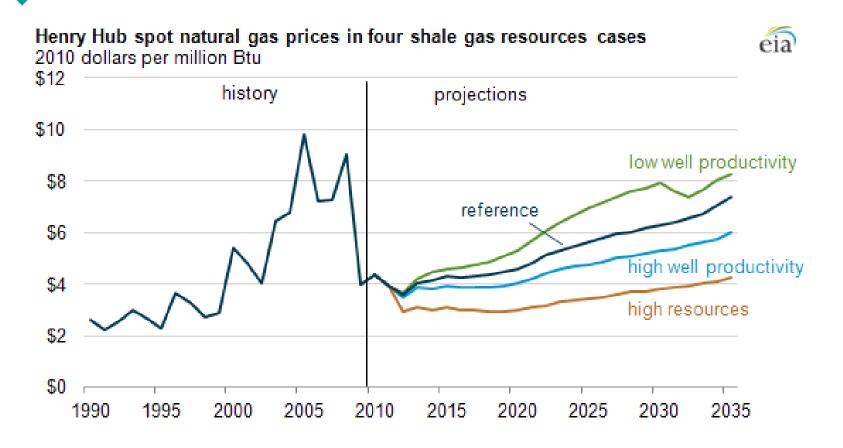
EIA Long Term Electricity Price Forecast (2%/Year Escalation)







US EIA Natural Gas Price Forecast AT NYMEX Futures Hub



Source: U.S. Energy Information Administration, *Annual Energy Outlook 2012*, June 25, 2012.



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US EIA Natural Gas Price Effects From Increased Exports

Effect of Increased Natural Gas Exports on Domestic Energy Markets as requested by the Office of Fossil Energy

Impacts overview

- Increased natural gas exports lead to increased natural gas prices
- Natural gas markets in the United States balance in response to increased natural gas exports largely through increased natural gas production.
- The remaining portion is supplied by natural gas that would have been consumed domestically if not for the higher prices.
- Even while consuming less, on average, consumers will see an increase in their natural gas and electricity expenditures.

Source: Energy Information Administration, Release date: January 19, 2012

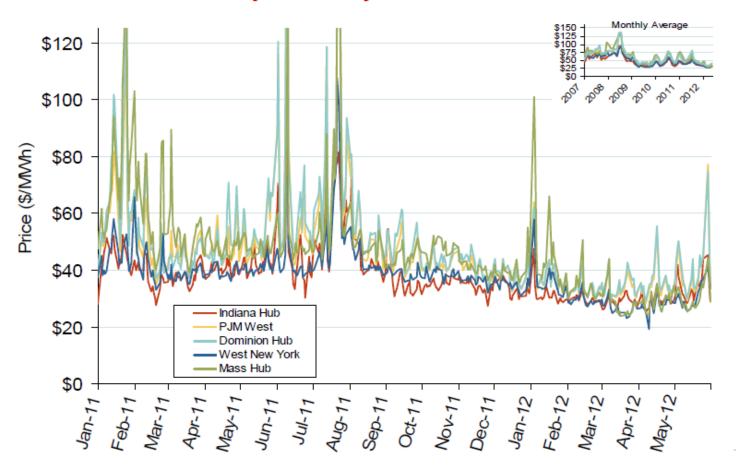


Wholesale Electricity Prices Are Volatile

New England Electric Market: Eastern Index Prices

Federal Energy Regulatory Commission • Market Oversight • www.ferc.gov/oversight

Eastern Daily Index Day-Ahead On-Peak Prices





Discussion





PUBLIC FACILITIES COMMITTEE REPORT

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#243-12 <u>COMCAST</u> petitioning for a grant of location to install conduit and vaults in

WELLS AVENUE as follows:

A) 1,666'+ of conduit from 75-95 Wells Avenue to 177 Wells Avenue.

B) Nine 2' x 3' vaults in Wells Avenue at the following locations: 75-95 Wells Avenue, 100 Wells Avenue, 120 Wells Avenue, 125 Wells Avenue, 145 Wells Avenue, 154 Wells Avenue, 160 Wells Avenue, 177 Wells Avenue and 180

Wells Avenue. (Ward 8) 08/03/12 @ 11:30 AM]

ACTION: APPROVED 8-0

NOTE: Mark Carter, Comcast Project Coordinator, presented the request to install 1,666' of conduit and nine vaults in Wells Avenue. Mr. Carter explained that this request for a grant of location is an extension of a grant of location that the Board of Aldermen approved in July 2012. During the process of obtaining the previous grant of location, Comcast received additional requests for services beyond the scope of the original petition.

The work is being done at the request of several of the tenants between 75-95 Wells Avenue and 180 Wells Avenue. The Department of Public Works has approved the grant of location with the standard street-opening permit conditions including a police detail. The public hearing was opened and no one spoke for or against the project. The Committee questioned where the vaults would be installed. Mr. Carter explained that the vaults are installed in the sidewalk berm and are flush with the earth. Ald. Lappin asked if there was any way to camouflage the steel vault openings. Mr. Carter explained that the vault covers are not very noticeable once installed. With that, Ald. Lappin moved approval of the petition, which carried by a vote of eight in favor and none opposed.

Public Hearing continued from July 18, 2012:

#197-12 HIS HONOR THE MAYOR requesting the Board of Aldermen authorize a long-

term lease with the solar photovoltaic firm, Ameresco Solar Inc., to allow for the installation of solar panels on the rooftops of five (5) public schools: Newton North High School, Brown Middle School, Memorial-Spaulding Elementary School, Countryside Elementary School and Bowen Elementary School.

[07/02/12 @ 5:03 PM]

ACTION: APPROVED 7-0-1 (Gentile abstaining)

NOTE: A public hearing was opened on July 18, 2012 and continued in order to allow for future input from property owners and for further information including a copy of the draft lease and Power Purchase Agreement. The July 18, 2012 report is attached. The Administration provided the draft lease, the Power Purchase Agreement and additional information to the Board of Aldermen in this past Friday's packet.

Chief Operating Officer Robert Rooney reviewed the request for authorization to enter into a twenty-year lease with Ameresco Solar, Inc. for the installation of solar panels on portions of the rooftops of five schools. The attached PowerPoint presentation highlights the major financial aspects of the project and construction details. Ameresco Solar, Inc. would install, operate, and maintain the solar panels over the lease period and the City would pay for 100% of

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the energy produced by Ameresco Solar, Inc. through a Power Purchase Agreement.

Chief Administrative Officer Robert Rooney pointed out that the City could expect the solar panels to generate over 80,000 kilowatt-hours (kWh) per year. There is an international movement towards solar power and clean energy. This proposal would increase solar energy generation eightfold in the City of Newton. In addition, the installation of solar panels is in keeping with the City's Energy Smart Initiative to reduce energy consumption, generate or allow the generation of clean energy and pay less for energy. The price of the energy produced by the solar panels is less than NStar's current rates. The energy generated by the solar panels would be at a fixed cost providing stability, as compared to open market volatility. In addition, the City will receive net metering credits from NStar. Attached is information on net metering from the Massachusetts Department of Energy Resources and NStar.

Since the July 18 Public Facilities meeting, the Administration, with input from the City's independent solar expert, Cadmus, has determined that it is not economically feasible to put solar panels on the roof of Bowen Elementary School. Therefore, the number of buildings involved in the project has been reduced to four. The Administration and Ameresco have reached an agreement on the guaranteed maximum energy production, which is 702 kW or 818,931 kWh per year. The School Department and School Committee were informed and are supportive of the proposed project. The Administration has also provided information to the Ward Aldermen where the schools are located and notice to individual abutters with a direct sight line to the proposed solar panels.

Jim Walker of Ameresco reviewed the financials with the Committee. Although the various rates are subject to change, Mr. Walker provided approximate energy savings. NStar still charges the City a fee or supply rate of \$0.96 for electricity and Ameresco will charge the City \$0.106 cents per kWh for electricity generated from the solar panels for the first three years, for a total rate payment of \$0.202 per kWh. After the three years of the contract, the annual fee escalator for Ameresco is 2.5%. The City receives a net metering credit from NStar of approximately \$0.175 for kWh generating a net electricity rate of \$0.027, which results in approximately \$0.069 in electricity rate savings. Mr. Walker reviewed three utility rate escalator scenarios with the Committee. If the utility rates remain flat over the next 20 years, the City stands to save \$1.2 million, if the rates increase by 2.5% the City will save a little over \$1.9 million, and if it increases at 3.5%, the City will save \$2,288,065.

Further negotiations with Ameresco have resulted in Ameresco agreeing to share equally the solar renewable energy certificates (SRECs) after year 10 of the power purchase agreement. One SREC represents the solar system's production of 1,000 KWh of electricity, which is then eligible to be sold. In order for a solar facility to be credited with that SREC, the system must be certified and registered. The SRECs generated by these solar panels would be purchased by NSTAR. NStar needs SRECs to meet solar production mandates placed upon them by the State. In Massachusetts SRECs are currently worth \$500 a piece but that price can fluctuate depending on the supply and demand.

Ameresco also agreed to reduce the cost per kilowatt-hour from 11 cents to 10.6 cents and reduce escalation from 3% for 20 years to 0% for the first 3 years and 2.5% thereafter. In addition, an early buy-out schedule would begin after year six of the lease. The executive summary of the draft lease and power purchase agreement is attached.

The City has worked with David Beavers from The Cadmus Group, who has functioned as an owner's representative. Mr. Beavers has worked with the City over the past 1 ½ years to help understand and negotiate the lease and power purchase agreement. Mr. Beaver reviewed all of the financial aspects of the contract including the 2.5% escalation of the rate for the solar generated power. It is his expectation that overall, the project will generate savings for the City and Mr. Beavers does not see the project as a large risk for the City. The objective to complete the installation and bring the solar arrays online by the end of the year remains. Ameresco has taken a risk and moved forward with the longest lead-time approvals for the arrays such as the utility approvals. The structural engineer has proceeded with further review of the roofs.

Questions

- Q. What if the state regulations change and net metering credits are no longer offered?
- A. Net metering credits are taken as they are generated. The state legislature adopted new language requiring investor-owned utilities offer net metering in 2009. In order for the net metering credit program to be cancelled, it would take a change to the state law. Even if the credit is not offered, the City could feed the solar power directly into the school and pay Ameresco directly.
- Q. If the project is not economically feasible in 15 years what is the plan?
- A. The generated energy would be fed back into the school buildings.
- Q. What happens at the end of the lease?
- A. The City can choose to have Ameresco remove the solar panels or purchase the panels.
- Q. What is the life expectancy of a panel?
- A. The panels have a life expectancy of 25 to 30 years.
- Q. At what angle will the panels be set at?
- A. The panels on the high school will be set at 5° and the panels on the elementary schools will be set at 15°. None of the panels will reflect into surrounding properties. The City did contact direct abutters and there were no objections to the panels.
- Q Is the City required to remove snow from the panels.

- A. The City would not be responsible for snow removal. The heat generated from the solar panels usually melts snow in their area. The independent structural engineer has to certify that snow removal is not required.
- Q. Will the City be charged if it is necessary to take some or all the solar panels offline to repair a roof?
- A. The City would not be charged for panel removal for up to three days. The City would not be considered negligent for panel removal for roof repair. Ameresco has never had to remove roof panels and for added roof protection, Ameresco will be providing an additional rubber membrane on the roofs under the panels.
- Q. What insurance costs does the City incur due to the installation of solar panels?
- A. The City cannot purchase insurance for the panels, as the City is self-insured.
- Q. What are the buyout costs?
- A. At 10 years, the buyout cost would be \$1.4 million and at 20 years, it would be \$114,000
- Q. Who would be the structural engineering firm used for the project.
- A. Ameresco would use CBI or BMC Construction.
- Q. What is the load bearing capacity of the Newton North High School roof, as there is concern that the weight of the solar panels may be an issue?
- A. Ameresco will provide the information on the load bearing capacity at the Finance Committee discussion. The solar panels are less than five pounds per square foot. Ameresco has reduced the number of proposed panels in some areas of the Newton North High School due to concern about the weight. Ameresco asks the structural engineer to run a number of tests to ensure that the roofs will continue to by structurally sound.
- Q. Who will provide a review of the structural engineer's report for the City?
- A. Ameresco and the Administration had not planned to do a peer review as the structural engineer would stamp and sign the structural report. Ameresco agreed to supply the structural engineer's data.
- Q. Are the open items in the power purchase agreement going to be resolved before the Board of Aldermen's vote?
- A. The Administration will attempt to address all open items before the vote.

Comments

The City should be aware that is taking a risk, but the project would only generate 5% of the City's energy use; therefore, the risk is minimal. If the project is not successful, the City is unlikely to suffer a significant monetary loss.

There need to be clear guidelines on snow removal and defined areas of the roofs the City should not attempt to remove snow. It is part of the detailed agreement and includes the license areas.

There should be further negotiation on the 2.5% escalator implemented after year three of the contract.

Public Hearing

The Chairman opened the continued public hearing for comment.

Eric Olsen, Chair of the Energy Commission, stated that people are working to put a disincentive on the use of carbon fuels. The Green Decade Coalition and the Energy Commission work to save the City money through green energy opportunities and this proposal appears to be a modest risk with likely financial savings.

Jim Purdy, Chestnut Street, added that the Energy Commission depends on qualified, certified experts to reach decisions and in this case, the Energy Commission was satisfied that both the City and Ameresco had done their due diligence to ensure that the risk to the City is limited. The project also reduces the City's reliance on carbon fuels.

Ed Craddock, Crafts Street, is in favor of the project and pointed out that the Town of Natick is paying a 3% escalation rate to Ameresco. He believes that the 2.5% escalator is reasonable, as the project must be viable for Ameresco.

At this point, the public hearing closed.

Conclusion

Ald. Crossley moved approval of the item as she feels that this is a small risk in terms of money and investment but a large step in terms of commitment to building a greener community. There was a sentiment that at some point the Board must trust that the negotiators to get the best deal for the City and that the risk for this project appeared minimal. Ald. Gentile abstained in order to hear the responses to the question on the load bearing capacity of the high school roof.

Respectfully submitted,

Anthony J. Salvucci, Chairman

CITY OF NEWTON

IN BOARD OF ALDERMEN

2012

ORDERED:

That in accordance with the recommendations of the Public Facilities Committee through its Chairman, Ald. Anthony J. Salvucci, and the Finance Committee through its Chairman, Alderman Leonard J. Gentile, the Mayor is authorized to enter into a twenty-lease and related power purchase agreement with Ameresco Solar Inc., a solar photovoltaic firm, to install, operate and maintain solar panels on the rooftops of four (4) public schools: Newton North High School, Brown Middle School, Memorial-Spaulding Elementary School, and Countryside Elementary School with the condition that any and all funding for monies owed to Ameresco Solar Inc., under the terms of this agreement, shall be included in an expense appropriation of the City's Public Buildings Department, and all energy credits earned as a result of the agreement, shall be applied to a municipal building electricity account, also under the control of the Public Buildings Department.

Under Suspension of Rules Readings Waived and Adopted

(SGD) DAVID A. OLSON	(SGD) SETTI D. WARREN
City Clerk	Mayor
	Date