



Finance Committee Report

City of Newton In City Council

Wednesday, May 29, 2019

Present: Councilors Gentile (Chair), Ciccone, Norton, Cote, Noel, Grossman, and Lappin;

Absent: Councilor Rice

Also present: Councilors Auchincloss, Downs, Krintzman, and Leary

City staff present: Josh Morse (Commissioner of Public Buildings), Lou Taverna (City Engineer), Barney Heath (Director of Planning & Development), Jason Sobel (Director of Transportation; Department of Public Works), Nicole Freedman (Director Transportation Planning; Planning & Development Department), and Maura O'Keefe (Assistant City Solicitor)

#197-19 Mayor's Appointment of Danielle Auriemma to the Chaffin Fund

HER HONOR THE MAYOR appointing DANIELLE AURIEMMA, 42 North Street, Newtonville (Ward 2) as a trustee of the JOHN C. CHAFFIN EDUCATIONAL TRUST FUND. (14-days: 06/03/19)

Action: Finance Approved 7-0

Note: Danielle Auriemma joined the Committee for the discussion of her appointment as a trustee of the John C. Chaffin Educational Trust Fund. Her resume and application were attached to the Finance Committee Agenda for the meeting. Ms. Auriemma is a Boston College graduate with a Master of Arts in Higher Education. She has lived in Newton since college and a homeowner for the past six years. She is a professional fundraiser that has worked at Harvard Medical school, Massachusetts Institute of Technology, Boston College Law School, and the Exeter Group. She is excited to work with the Chaffin Trustees on awarding scholarship to see the impact that the scholarships have on students. Serving as a trustee meshes well with Ms. Auriemma's professional expertise and her wish to become more involved in the community to help students attend college.

A Committee member pointed out that the Chaffin Scholarships are a great resource for graduating students. It would be good to personalize the awarding of the scholarships for the recipients and promote the scholarship program. The scholarships are need based and financial information is self-reported, which requires verification. The Chaffin Fund Trustees are looking at linking the scholarship application to the FASFA to streamline the process.

A Councilor asked for more detail on how different scholarships are awarded. Currently each high school provides students with one application for all scholarships. If students do not fill out the application, they are not considered for scholarships. Some scholarships are need based and others have specific criteria that must be met to qualify. The staff at each high school review the applications for students within their school and make recommendations on which scholarships should go to which students.

Committee members are pleased to have someone with Ms. Auriemma's background as a trustee and thanked Ms. Auriemma for her willingness to serve. Councilor Grossman moved approval, which carried unanimously

Referred to Programs & Services, Public Facilities, and Finance Committees

#102-19 Request to appropriate \$400,000 for NewCAL project

HER HONOR THE MAYOR requesting authorization to appropriate and expend four hundred thousand dollars (\$400,000) from Free Cash for the purpose of funding the completion of feasibility, schematic design, and site plan approval for the NewCAL project.

Programs & Services Approved 6-0 with a condition on 04/17/19

Public Facilities Approved 6-0-1 on 04/17/19 with the following condition: that the Public Buildings Department and NewCAL Working Group return to the Council upon completing their evaluation and recommendation of one or more sites, which must be done prior to the expenditure of \$150,000 of the \$400,000 appropriated

Action: Finance Approved 7-0 with the above condition and a condition that the Public Buildings Commissioner update the Council when the site list is narrowed to 3 to 5 sites

Note: Commissioner of Public Buildings Josh Morse presented the request for \$400,000 to fund the completion of the feasibility study and fund design work. The Programs & Services and Public Facilities Committee approved the request with a condition that Commissioner Morse and the Newton Center for Active Living (NewCAL) Working Group return to the Council once an evaluation of possible sites is done and there is a recommendation of one or more sites for NewCAL prior to expenditure of more than \$150,000 of the requested \$400,000 in funding. Commissioner Morse assured the Committee that the Administration would not expend more than \$150,000 before developing a short list of less than five potential NewCAL sites.

Commissioner Morse explained that the Administration and the project architect already looked at 145 possible sites around the City and eliminated sites that are already in use, impractical, or too small, which narrowed the sites down to 24. A list of the 24 sites was attached to the agenda. Several of the 24 sites on the list are not considered good locations due to factors like on site activities and topography. The plan is to have the architect and Administration evaluate sites and develop a short list of less than five sites that will be shared with the Council sometime in the fall.

Mr. Morse reviewed the attached breakdown of the requested funds and the previously approved \$100,000. To this point the City has expended \$58,000 on architectural services, \$40,000 on the Owner's Project Manager (OPM), and \$2,000 on miscellaneous expenses. The funds were used to determine square footage for the center, programming space and needs, community meetings, community engagement, and website management. The requested \$400,000 will fund \$220,000 in architectural services, \$80,000 for OPM services, \$60,000 for site and environmental investigation, and \$40,000 for other expenses. The first \$150,000 will be used for developing the short list of sites and OPM services for staffing both community and city meetings and website management.

Commissioner Morse reminded the Committee that the original architect for the project went bankrupt. The City is now working with BH + A on the NewCAL project. BH + A has experience in designing senior centers and is one of the City's on call architects. The firm did go through an abbreviated Designer Selection process and the Designer Selection Committee recommended that the City contract with BH + A. BH + A is currently reviewing the work of the previous architects and the City and once that is complete, they will shift their focus to narrowing down the 24 sites to three to five sites. It was pointed out that there is not enough money to evaluate all 24 sites. The Commissioner stated that the 24 sites will be evaluated based on criteria and the best sites will rise to the top and it will become obvious which sites to fully evaluate.

A Committee member expressed concerns about conversations with some seniors related to their preference that the facility not have children, as a permanent staple. It is important that the City prioritize seniors when planning the building and programming. Commissioner Morse referred to the NewCAL Vision Statement and principles that make it clear that the priority is a center for older adults. There was a question on what experience the OPM has with senior programming and management and it was that the project would rely on Senior Center Director Jayne Colino and her staff, complimented by the experience of BH+A and the OPM. It was noted that there is at least one Councilor that is interested in which department would manage the facility. Commissioner Morse made it clear that management of the facility is something that the Administration will continue to work on and refine as the project moves forward.

A Committee member asked if there was any consideration given to a decentralized model of some sort to ensure that the City does not design and build facilities that already exist in Newton. Commissioner Morse explained that the City has a decentralized model of sorts. The village structure, and senior programming scattered around multiple facilities exists now and will remain in the future. The Administration will continue to explore opportunities to expand programs outside of the central location but is not looking to compete with the private sector unless there is a need based on important programs being cost prohibitive for seniors.

There was concern about making sure the City would not spend money on the design of the new building before a site was identified. Although the Councilors are supportive of the project, they do not want to expend funds on schematic design that may have to be undone or redone if the preferred site doesn't materialize. In order to avoid this, an additional condition was suggested that the Public Buildings Commissioner update the Council when the site list is narrowed to 3 to 5 sites.

There was a question on the site selection process because it seems like the only options included the loss of parks, which is a concern because of the importance of parks. Commissioner Morse responded that one of the primary goals is to not produce a net loss of active field space. The compromise the Administration would likely seek if one of the park sites were selected would be more optimally utilizing passive green space, or park master planning and reconfiguration to facilitate the project without the

loss of primary park features. The taking of any land by the City will be controversial. If a park site is selected, it would need the support of the Council and the community.

There were no further questions and Councilor Grossman moved approval of the request with the existing condition and proposed condition. The item carried by a vote of seven in favor and none opposed.

Referred to Public Facilities and Finance Committees

#158-19 Appropriation of \$250,000 for design of library parking lot

HER HONOR THE MAYOR requesting authorization to appropriate and expend two hundred fifty thousand dollars from Free Cash for the purpose of funding the architectural and engineering design of a “new” Newton Free Library parking lot.

Public Facilities Approved as amended 4-1-1 (Laredo abstaining, Gentile opposed) on 05/08/19

Action: Finance Approved as Amended 4-2-1 (Cote, Gentile opposed; Ciccone abstaining) @ \$175,000

Note: City Engineer Lou Taverna presented the request for funding to design the reconstruction of the Newton Free Library parking lot up to bidding construction. The design will include improvements to stormwater infrastructure, pedestrian access, and vehicular circulation. Additionally, the design will address compliance with ADA requirements for accessible parking spaces and include new landscaping features, the removal of trees, and planting of new trees. Two concept plans were included in the materials attached to the agenda. One plan includes pedestrian walkways and the other does not. Both plans increase the number of parking spaces from the 181 spaces that exist in the lot now but there are 217 spaces in the conceptual plan without walkways and 206 in the design with walkways. The City is still determining whether to include pedestrian walkways and where to locate them if included. A Committee member stated that some Councilors would prefer better pedestrian access over additional parking spaces. The final design for the parking lot will be presented to the Council. The design cost estimate for the project is \$175,000. The Public Facilities Committee approved the item as amended at \$175,000.

The library parking lot has been one of the top priorities for reconstruction for several years due to the drainage issues. The installation of the solar canopies is not what is driving this project; however, the original plan was to have the company installing the solar panel canopies in the library lot handle the reconstruction of the lot, but costs became prohibitive. It is less expensive for the City to reconstruct the lot. Committee members voiced their opinion that the solar installation and parking lot construction need to be coordinated. The Department of Public Works and the parking lot designer will coordinate the parking lot design with Ameresco’s solar installation design. Coordination of the design ensures the best parking lot design.

A Committee member suggested that the City consider charging for parking at the library. It was pointed out that there is not reliable public transportation to the library. People that take their children

to the library cannot easily walk or bike to the library and must use a car. In the past, there were branch libraries located in each village that people could easily walk to, which is not the case today.

A Committee member requested a cost analysis to make sure that the solar savings will cover the cost of the rehabilitation of the parking lot. There was also a request for the projected annual savings from the library lot solar panels. The estimates for all the solar sites are attached. The Chair explained that he would be voting against the item for three reasons. The first being that he believes that the new parking lot is being used as a carrot for support of the solar canopies. The second reason is that the overall cost for the reconstruction of the lot is likely to be close to a million dollars, which could be used to address other priorities and the third reason is that adding more spaces to the library lot feels inconsistent with what the Administration is promoting in regards to transportation and parking initiatives.

Councilor Norton moved approval of the item as amended at \$175,000, which carried by a vote of four in favor, two opposed, and one abstention.

Referred to Zoning & Planning and Finance Committees

#149-19 Appropriation of \$100,000 for consulting services for the Planning Department

HER HONOR THE MAYOR requesting authorization to appropriate and expend one hundred thousand dollars (\$100,000) from Free Cash for the purpose of funding consulting services for the Planning Department to enable the department to hire subject matter expert for projects.

Zoning & Planning Approved 6-0-2 (Kalis and Krintzman abstaining) on 05/13/19

Action: Finance Held 7-0

Note: Director of Planning & Development Barney Heath presented the request for funds for consulting services as needed. Mr. Heath anticipates using consultants to supplement the work of the Planning Department on several projects. The housing needs assessment that is part of the five-year housing strategy is required to be submitted to the Department of Housing and Urban Development (HUD) in 2020 and will likely require the City to hire consultants to complete the update by the deadline. In addition, the required updates to the Open Space and Recreation Plan are due in the upcoming year. Conservation Planner Jennifer Steele is taking the lead on the update but is going to need support from consultants with recreation and open space expertise. The Planning & Development Department continues to work on zoning reform and the need for outside review, graphic production, and build-out analysis associated with the draft zoning ordinance is continuing into the next Fiscal Year (FY). Additional consulting funds are likely required for the ADA Transition Plan and the Climate Action Plan. Mr. Heath anticipates a need for consultants to undertake conceptual design for traffic calming, bike lanes, and provide options on complete street projects. The requested funds will allow the Planning Department to streamline the hiring of the consultants because funding will be readily available.

Committee members pointed out that the Planning Department did the previous updates to the Open Space and Recreation Plan and the 5-year housing strategy in-house. The Committee asked Mr.

Heath to provide information on how the Planning Department handled the previous updates. In addition, members of the Committee pointed out that the City has already spent money to hire consultants for zoning reform. Mr. Heath explained that upcoming components of zoning reform will be very complicated and require substantial analysis. The Planning Department staff can take on all the updates and zoning reform, but the day-to-day work of the department will suffer.

A Committee member questioned why the consulting money was not included in budget if the Administration knew that the Planning Department would need funds for consultants throughout the fiscal year. Chief Financial Officer Maureen Lemieux explained that she considers this request as part of the FY 20 budget package. It is funding that is needed to get through the next fiscal year. Ms. Lemieux added that during the budget process thought was given to adding an additional planner position; however, the wide variety of expertise needed to complete the many ongoing projects requires expertise that cannot be encompassed in one planning position. Hiring consultants will give the Planning Department to address the needs for expertise in a wide variety of planning areas.

It seems premature to request the funding for consultants. Usually the Council is provided with a scope of work and cost for consulting services. Ms. Lemieux explained that by providing the funding now, the Planning Department will be able to hire consultants as needed to move ahead with projects. Members of the Committee would like detail on the scope of work for the consultants for each of the above noted projects. Ms. Lemieux stated that the Executive Office will scrutinize each proposed consultant contract.

Mr. Heath provided the following estimated costs for consulting services on the noted projects: \$28,000 for Open Space and Recreation Plan, \$50,000 for transportation, \$5,000 to \$10,000 for ADA Transition Plan, and \$50,000 for zoning reform. The Committee members would like a better understanding of how the requested funding will be spent. The Committee is aware that the Planning Department is working on several projects and has a lot on its plate but would like more specifics on the scope of work and the cost of the individual consulting service. It was pointed out that the Planning Department has \$50,000 in its budget to move forward with hiring consultants. With that, Councilor Lappin moved hold, which carried unanimously.

Referred to Public Safety & Transportation and Finance Committees

#82-19

Authorize the Director of Planning to set the fees for parking meter spaces

COUNCILORS AUCHINCLOSS, DOWNS, LEARY, KRINTZMAN, RICE, NOEL, DANBERG, GROSSMAN, MARKIEWICZ, CROSSLEY, SCHWARTZ AND THE DIRECTOR OF PLANNING & DEVELOPMENT requesting amendment to Section 19-191. **Parking meter fees.** of the City of Newton Ordinances which sets the specific fees for parking meters be deleted and replaced with the following text: The fees for parking in a parking meter space during the days and hours designated for parking meters will be set by the Director of Planning and Development, in consultation with the Commissioner of Public Works.

Public Safety Approved as amended 5-0-2 (Cote, Ciccone abstaining) on 04/03/19

Action:

Finance Held 5-2 (Grossman, Noel opposed)

Note: Director of Planning & Development Barney Heath, Transportation Planner Nicole Freedman, and Director of Transportation Jason Sobel were present for the discussion of the item. The Planning Department and Department of Public Works worked together on a proposal for differential priced parking in Newton. The attached memo from the Director of Planning and the Transportation Planner provide the details of what differential parking is and how the proposal would be implemented. The principle of differential parking is to manage parking by setting a parking availability goal and adjusting parking meter rates to achieve the goals in high parking demand areas.

The request is to amend the ordinance to give the Director of Planning in consultation with the Commissioner of Public Works the ability to set the fees for parking meter spaces in order to implement differential parking. One of the key aspects of the program is the ability to adjust parking meter rates as needed to effect change to parking trends. The Director of Planning needs the ability to change rates rapidly without having to go through the Council to amend the ordinance, as is currently required.

Although the Committee was supportive of the program, several councilors had concerns regarding ceding the responsibility of setting the parking meter fees to the Administration. Mr. Heath and Councilors explained that differential parking will not work without the ability to rapidly change parking meter rates to meet the parking availability goal. The parking demand and market will set the parking meter rate. It was pointed out that it makes sense to allow the market to set the parking meter rate. It was suggested that the Council could set a range of parking meter pricing which would allow adjustments to the parking meter rates within a set limit. There was also a request that there be six-month check-ins on how differential parking is working. The Planning Director is comfortable with this approach and will work with the Transportation Planner to develop a pricing range.

Members of the Committee would like the following before voting the request;

- 1) Written opinion from the Law Department on the proposed ordinance change.
- 2) A proposed range for parking meter pricing
- 3) Information on how Boston implemented its parking meter program in the Seaport and Back Bay and whether the program required Council approval.

The Committee agreed to take the item up again as soon as the information is available. Councilor Norton moved hold on the item, which carried unanimously.

#343-18 Ordinance amendment to divest of funds from fossil fuel companies

COUNCILOR NORTON proposing an ordinance amendment to divest the City of direct or indirect holdings in fossil fuel companies.

Action: Finance Approved Subject to Second Call 6-0 (Cote recused)

Note: This item was previously discussed in the Finance Committee on January 28, 2019, October 22, 2018, and September 24, 2018. The reports on the discussions are attached. The Committee

held the item at the January 28, 2019 meeting in order to better understand what the possible financial impacts are if the City divests from fossil fuels and whether divesting from fossil fuels could have unintended consequences to the City's investments. Committee members also asked to meet with a representative of the Law Department to work on ordinance language to clarify the definitions for direct and indirect holdings and whether it is appropriate to specifically name the Carbon Underground 200 in the ordinance as a fossil fuel divestment index to use as a resource for determining whether a company is considered a fossil fuel company.

Assistant City Solicitor Maura O'Keefe joined the Committee for the discussion and provided the attached memo addressing the purpose of the reference to the Carbon Underground 200 and how information from Carbon Underground 200 or similar indexes could impact the Treasurer's decisions in connection with the proposed ordinance. The purpose of naming the Carbon Underground 200 Index in the ordinance is to provide a standard for the definition of a fossil fuel company that is widely accepted by the industry. Carbon Underground 200 provides a list of coal, oil, and gas companies ranked by carbon emissions contained in their reserves. Councilor Grossman provided the attached information from Fossil Free Indexes, LLC, that provides details on the methodology used to develop the Carbon Underground 200 Index. The information in the index would provide an aid to the Treasurer in evaluating whether a company is in the fossil fuel business to the extent that the ordinance prohibits investment in that company. There are other companies that provide this type of information to investors looking to divest from fossil fuel companies. The reference to Carbon Underground 200 is not the only way to provide definition of prohibited investments and Assistant City Solicitor O'Keefe and the Law Department are willing to work with the Committee on alternate solutions.

Chief Financial Officer Maureen Lemieux stated that she has discussed the proposed ordinance with the Mayor and Treasurer Jim Reardon. The Mayor asked Ms. Lemieux to convey that the Mayor understands the impulse to do this type of ordinance, but she believes that it is better to be insider activists in order to influence change rather than being on the outside. The Mayor and Mr. Reardon requested that if the proposed ordinance moves forward the following amendment to the draft be made by deleting : such as the Carbon Underground 200, or other similar, professionally researched resource" and replace it with "maintained by the current manager of the Fund." The Committee felt that the suggested amendment made sense and supported the change.

The two funds under the direct control of the Treasurer included in the draft ordinance as eligible for divestment are the Workers Compensation Fund and the Newton North High School Fund. The total value of both accounts is approximately \$12,681,000. The divestment of fossil fuels in these two accounts equates to about \$320,000 worth of equities. There is one other fund known as the Commonwealth Fund under the direct control of the Treasurer that currently contains no funds. It was suggested that it be included in the Ordinance because at some point the Commonwealth Fund may have money for investment. The Committee members were amenable to adding the Commonwealth Fund to the ordinance.

The Committee was concerned that the ordinance language may not exclude all other municipal funds from divestments except the three funds named in the ordinance. There was a suggestion that additional language be added stating that the ordinance applies only to the three named funds. The Committee members agreed with adding the suggested statement.

There were no further comments or questions on the draft ordinance language and Councilor Grossman moved approval subject to second call to ensure that the revised ordinance (attached) is available for review before the Council meeting. The motion carried by a vote of six in favor and one recused.

#196-19 Mayor's reappointment of Edward Gourdeau, Jr. as a Constable

HER HONOR THE MAYOR reappointing EDWARD GOURDEAU, JR., 94 Clearwater Road, Newton Lower Falls as a Constable for the City of Newton for a term of office to expire April 30, 2022. (60 days: 7/19/19)

Action: Finance Approved 7-0

Note: Newton Fire Fighter Edward Gourdeau is being re-appointed as a Constable of the City for a seventh three-year term. The appropriate paperwork is on file with the Clerk's office, including a copy of the required \$5,000 bond. The Chair did not feel it was necessary for Mr. Gourdeau to attend the meeting as he is a re-appointment, but he can be invited to the next meeting if there are any questions. There were no questions and Councilor Ciccone moved approval of the re-appointment, which carried unanimously.

All other items before the Committee were held without discussion.

Respectfully submitted,

Leonard J. Gentile, Chair

NEWCAL

3/20/2019 #102-19

ACOUNT NUMBER	CATEGORIES OF THE BUDGET	#282-18	New Request
C1151801			
58SBA02	ARCHITECTURAL SERVICES	\$ 58,000.00	\$ 220,000.00
58SBA01	OWNER'S PROJECT MANAGER	\$ 40,000.00	\$ 80,000.00
58SBA03	SITE/ENVIRONMENTAL		\$ 60,000.00
5825	GENERAL CONTRACTOR	\$ -	
58SBA04	OTHER	\$ 2,000.00	\$ 40,000.00
5793	PROJECT CONTINGENCY	\$ -	
5795	UNDISTRIBUTED PROJECT BUDGET	\$ -	
TOTAL PROJECT EXPENDITURE BUDGET		\$ 100,000.00	\$ 400,000.00

SOLAR PHASE 3 AS PERCENT OF TOTAL BUILDING USE

Department	Facility	FY 2018 Use kWh	Phase 3 Solar kWh	solar as % of Bldg Total use
Fire Department	FD 3# and HQ New	484,200	76,046	16%
Newton Free Library	Main Library	839,940	404,794	48%
School Department	Angier Elementray School (NEW)	450,672	102,992	23%
School Department	Charles E Brown MS	427,204	449,388	105%
School Department	F A Day MS	1,198,428	233,766	20%
School Department	Mason-Rice ES	224,760	198,468	88%
School Department	Memorial Spaulding ES	237,760	199,969	84%
School Department	Newton Cultural Ctr/Carr School	260,560	76,663	29%
School Department	Newton Education Center	802,013	435,014	54%
School Department	Newton North HS (2010)	3,896,363	937,493	24%
School Department	Oak Hill MS	620,468	194,805	31%
School Department	Williams ES	174,440	154,958	89%
School Department	Cabot **	462,113	158,490	34%
School Department	Zervas New School	543,408	203,796	38%
		10,622,329	3,826,642	36%
DPW	Pleasant Street Lot		123,370	
			3,950,012	

**Modelled kWh use for Cabot.



**Newton Ameresco Sites
Expected Savings
Summary Sheet
(May 29, 2019)**

Site	Configuration	DC Capacity (KW)	AC Capacity (KW)	Year 1 Generation (kWh)	Expected Savings Scenarios*	
					Scenario 1	Scenario 2
					2% Utility Escalation	0% Utility Escalation
Main Library	Behind-the-meter	348.7	266	404,794	\$561,908.89	\$356,461.71
North HS Walnut	Behind-the-meter	294.8	220	354,693	\$492,602.27	\$312,541.25
FA Day MS	Behind-the-meter	192.4	166	233,766	\$417,872.09	\$263,949.17
Ed Center	Behind-the-meter	80.7	66.6	98,002	\$168,919.84	\$113,454.39
Fire Station 3	Behind-the-meter	62.9	66.6	76,046	\$138,146.96	\$93,876.32
Zervas ES	Behind-the-meter	166.5	133	203,796	\$282,897.43	\$179,463.62
North HS Lowell Avenue	Standalone AOBC Discou	491.4	360	582,800	\$222,372.00	\$222,372.00
Total		1637.4	1278.2	1,953,897	\$ 2,284,719.48	\$ 1,542,118.46

*Expected savings is based on avoided volumetric charges including basic service rate, transition, distribution, energy efficiency and renewable energy charges for BTM sites.



Ruthanne Fuller
Mayor

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Barney S. Heath
Director

DATE: March 29, 2019

TO: City Council, Public Safety & Transportation Committee

FROM: Barney S. Heath, Director of Planning and Development
Nicole Freedman, Director of Transportation Planning

CC: James McGonagle, Commissioner of Public Works
Jason Sobel, Director of Transportation Operations

RE: **Background for discussion of Differential Pricing for Parking**

On November 7, 2018, staff presented to PS&T a proposal to implement differential priced parking in Newton. The presentation aimed to provide justification to move forward on an ordinance change that allows staff the ability to set meter rates administratively. On April 3, 2019, staff will return to refresh Councilors on differential priced parking, answer questions and present proposed ordinance change language, with an eye towards voting on the proposed ordinance change language.

Existing Language:

Sec. 19-191. Parking meter fees. The fees for parking in a parking meter space during the days and hours designated for parking meter zones shall be as follows: (a) For parking meter zones with a time limit of four hours or less, the fee shall be five cents (\$0.05) for each four (4) minute period or part thereof; and (b) For parking meter zones with a time limit of greater than four hours, including those parking meter zones that have no time limit, the fee shall be five cents (\$0.05) for each six (6) minute period or part thereof. (Rev. Ords. 1973, § 13-157; Ord. No. 53, 2-18-75; Ord. No. 70, 5-5-75; Ord. No. 318, 3-5-79; Ord. No. R-28, 3-16-81; Ord. No. S-29, 12-5-83; Ord. No. W-44, 5-29-01; Ord. No. X-207, 4-18-06; Ord. No. Z-58, 12-21-09)

Proposed Language:

Sec. 19-191. Parking meter fees. The fees for parking in a parking meter space during the days and hours designated for parking meters **will be set by the Director of Planning and Development, in consultation with the Commissioner of Public Works.**

The following sections are taken from the staff memo to PS&T dated November 7, 2018.

From 11/7/18 PS&T memo

The Newton Centre Parking Strategy recommends actively managing parking as a fundamental strategy to address parking challenges in the City. Staff would establish a target parking availability goal and adjust meter rates periodically to achieve the goal. Key to the success, is providing staff the nimbleness to adjust rates multiple times per year in pursuit of the goal.

“DIFFERENTIAL” VS “DYNAMIC” PRICED PARKING

Differential priced parking, a term coined by the City of Newton is intended to be a cousin of dynamic priced parking. Both are based on the same guiding principle of actively managed, demand-based parking.

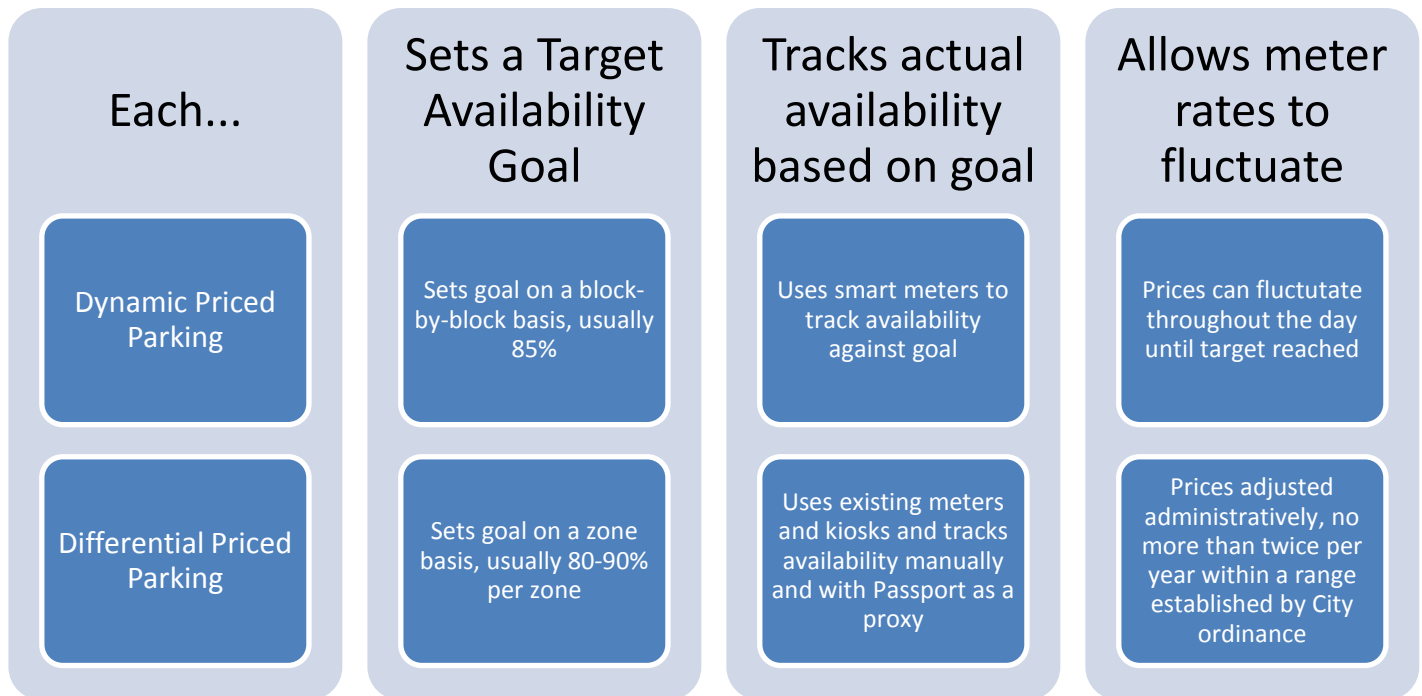
Demand-Based Parking Believes...

1. Cities historically have charged below market rate for parking
2. The supply and demand imbalance causing:
 - a. Cruising, congestion, wasted time and fuel, and polluted air
 - b. “shortages” of close-in front-door spaces leading to frustration and discouraged businesses
3. Demand- based pricing corrects the imbalance by
 - a. Establishing target availability goal
 - b. Adjusting meter rates by location and and/or time in pursuit of the goal

The key difference between dynamic pricing and our proposal is implementation. Dynamic pricing works best as a theory. Our proposal applies implementation lessons learned from pilots in other cities. Key lessons learned from Boston that would be heeded in Newton include:

Pilot Project Lessons Learned	Newton Recommendation
Most parkers don’t have real-time knowledge of meter rates, so rates should be set for a fixed, longer period of time, as opposed to flexing in real-time.	Review and adjust meter rates every 6 months as opposed to flexing rates daily, weekly or monthly
Hourly meter rates of \$1-\$2 are not enough to significantly impact parkers’ habits	Set initial meter rates with understanding that subsequent increases may be needed to achieve market rate
Setting rates by block is an operational undertaking and challenging for parkers to understand	Set rates on a zone basis, as opposed to block-by-block basis
Smart technology is typically rolled out prior to dynamic pricing, automating utilization evaluation	Newton can start with manual evaluation of utilization and use Passport as a proxy for more data

From 11/7/18 PS&T memo



AN IMPLEMENTATION EXAMPLE: NEWTON CENTRE

By way of example, staff will walk through a proposal to improve parking in Newton Centre, using differential priced parking.

The Newton Centre Parking Strategy determined the following conditions exist in Newton Centre:

- Utilization of all metered spaces is high, particularly from 10 AM – 4 PM weekday
- Challenges are particularly acute on Union Street, which is nearly 100% full all day and nearly 50% of parkers overstay the 2-hour time limit.
- Overall there is an abundance of public spaces available, with utilization of on-street non-metered spaces in the periphery vastly underutilized.

To address the challenges, staff would propose Phase I changes as follows:

- Adopt 85-90% occupancy goal
- Maintain long-term meter rates
- Increase rates of short-term meters to encourage parkers, particularly long-term parkers, to find alternatives to front-door spaces

The City would evaluate the Phase I changes via manual counts and using Passport and kiosk data. After six months, staff would seek to make additional improvements such as changes to meter rates, time limits or non-meter regulations in pursuit of the target availability goal.



Ruthanne Fuller
Mayor

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Barney S. Heath
Director

Referred to Public Facilities and Finance Committees

#52-19 Approve a \$500,000 for snow and ice removal

HER HONOR THE MAYOR requesting authorization to transfer the sum of five hundred thousand dollars from the Budget Reserve – Snow and Ice Removal Account to the following accounts:

Rental - Vehicles (0140110-5273).....	\$350,000
Regular Overtime (0140110-513001).....	\$150,000

Public Facilities Approved 8-0 on 01/23/19

Action: Finance Approved 6-0 (Gentile not voting)

Note: Commissioner of Public Works Jim McGonagle presented the request for a transfer of \$500,000 from Budget Reserve to the Department of Public Works’ snow removal accounts. Commissioner McGonagle provided the Committee with a breakdown of the department’s snow operation costs to this point, which was attached to the agenda. The Department has used \$1.2 million dollars this snow season to deal with ice and 7½” of snow, fill the salt sheds and replace and repair equipment in preparation for this winter. At this point the total cost per inch is \$172,370.43 but that includes the start up costs and should come down as the winter progresses.

The Public Works Department continues to try to keep snow storage out of the parks. It still utilizes the snow melter when room is needed for additional snow storage at the City yards. The Committee understood the need for the transfer and Councilor Grossman moved approval, which carried unanimously.

#343-18 Ordinance amendment to divest of funds from fossil fuel companies

COUNCILOR NORTON proposing an ordinance amendment to divest the City of direct or indirect holdings in fossil fuel companies.

Action: Finance Held 5-1 (Norton opposed; Gentile not voting)

Note: This item was previously discussed in the Finance Committee on October 22, 2018 and on September 24, 2018. The reports on both discussions are attached. The item was held to discuss the proposed divestment of direct and indirect holdings in fossil fuel companies with a member of the Investment Advisory Committee and for responses to the following questions:

- What impact would this ordinance have on the investment policy?
- What constitutes investment in indirect holdings?
- What are the consequences related to the indirect holdings language in the ordinance?
- What financial impact does this ordinance have?

- How does this ordinance limit the City in terms of what funds the City can invest in? For example, would it preclude the City from investing in the S&P 500?

Investment Advisory Committee member Jim Mnookin joined the Committee to continue discussion of this item. Mr. Mnookin began the discussion by stating that people have different views on what it means to be “fossil free” in terms of investment. Some people would limit the definition of fossil fuel divestment to companies that are directly involved in the extraction and production of fossil fuels, while others would add companies that are associated with companies involved with fossil fuel companies. It is difficult to define “direct” and “indirect” holdings, as they are subjective. Mr. Mnookin pointed out that there are fossil-free, low carbon, and social choice portfolios available but he is not sure that they would meet the criteria of the City’s definition of fossil free.

Mr. Mnookin stated that it is difficult to determine what the financial impacts are of divesting in fossil fuel. He can make the argument that retrospectively the fossil fuels have done poorly. Ten years ago, 12% of Standard & Poors 500 Index consisted of fossil fuel stock but now that percentage is 4%. There is also the possibility that the fossil fuel stocks will rebound.

There is no concrete road map on divesting from fossil fuels and how it would impact the City. Mr. Mnookin pointed out that there have been studies concluding that in the long-term the potential risk in divesting from fossil fuel companies is negligible.

The Committee members thanked Mr. Mnookin for his input. The Committee still has questions related to what City accounts would be impacted if the City divests from fossil fuels. There is some concern that by divesting from fossil fuels, there could be unintended consequences to the City’s investments. Committee members would also like to meet with a representative of the Law Department to work on ordinance language including defining direct and indirect holdings. The definition for indirect holdings needs to be clarified or removed from the proposed ordinance. The Committee also requested that Treasurer Jim Reardon join the Committee for the next discuss to explain what accounts would be impacted by divesting. As the Committee wanted further information, Councilor Noel moved hold, which carried unanimously.

Referred to Public Facilities and Finance Committees

#51-19 Approve \$3 million for the Pavement Management Program

HER HONOR THE MAYOR requesting authorization to appropriate and expend one million seven hundred fifty thousand dollars (\$1,750,000) from the January 15, 2019 Declaration of Overlay Surplus and authorization to transfer the sum of one million two hundred fifty thousand dollars (\$1,250,000) from Capital Stabilization for a total of three million dollars (\$3,000,000) to be transferred to the City’s Pavement Management Program.

Public Facilities Approved 5-0-2 (Lappin Gentile abstaining) Subject to Second Call on 01/23/19

Action: **Finance Approved 7-0**

composition. Once an individual is screened, a personalized wellness plan is developed with a goal of improving overall health and injury prevention. All participants get access to online portal that provides information on workouts, nutrition, diet and mental health. In addition, gives participants access to specialists that include nutritionists, physical therapists, physical trainers, and mental health professionals.

Participation in this program is voluntary. The contractor will do one testing session during each shift at every station and do a couple of make-up sessions for any personnel that missed their testing session. The testing takes about ½ hour. The union is very supportive of this program and is encouraging all personnel to participate. Several fire departments in the area have used this contractor with positive results. The number of injuries and medical costs associated with injuries and overtime have decreased in those departments and Chief Proia is hoping for similar results.

The Committee was pleased with both grant programs. It was suggested that the Chief check with health care companies to see if they would be willing to provide the matching funds for the programs. The Chief agreed to do this. Councilor Cote moved approval, which carried by a vote of five in favor and none opposed.

#343-18**Ordinance amendment to divest of funds from fossil fuel companies**

COUNCILOR NORTON proposing an ordinance amendment to divest the City of direct or indirect holdings in fossil fuel companies.

Action: Finance Held 4-0-1 (Norton abstaining)

Note: Councilor Norton explained that this item was held at the Finance Committee meeting on September 24, 2018 for Treasurer Jim Reardon to participate in the discussion and answer questions related to divesting from fossil fuel investments. Councilor Norton previously met with the Treasurer to discuss which funds would be eligible for divestment and learned that there are only two investment accounts under the City's direct control where there is the opportunity to divest from fossil fuel holdings. Although it is a small subset of accounts, Councilor Norton believes that it is important from a symbolic standpoint for the City to divest from fossil fuel investment wherever possible.

Treasurer Jim Reardon stated that the two eligible account are the Workers Compensation Account and the Newton North High School Fund. The total value of both accounts is approximately \$12,681,000. The divestment of fossil fuels in these two accounts equates to \$320,000 worth of equities. Both accounts are under the same investment manager, Bank of New York Trust, who is using a portfolio that includes nine equities in the energy sector. It would be a simple process to ask the investment manager to divest from the fossil fuel investments and replace those holdings with other equities. The divestment of these equities in the accounts is not something that is going to cause any problems or issues for the City. The Treasurer cannot guarantee but is almost certain that any investment manager that the City uses would have screened out all companies that are tangentially involved with fossil fuels. The City would need to rely on the brokers to tell the City what companies the City needs to divest from.

The Committee reviewed the attached draft ordinance. There was concern that if the state law changes related to stabilization funds, the divestment of fossil fuels could potentially limit what the City could invest in, such as the Standard and Poors (S&P) 500. The City could end up pushing itself into higher cost funds because of the limitation. A Committee member pointed out that it is almost impossible to divest from companies with indirect holdings in fossil fuels. Mr. Reardon felt that an investment manager could find appropriate substitutions like a telecommunications mutual fund, which would be similar in rating and yield.

Several Committee members were concerned with the indirect holdings language. It is very hard to beat the S&P especially in excess of the fees an investment manager is charging. There is concern that this ordinance would prevent the City from investing in low-cost index funds in the future. It was pointed out that it is worth a small amount of money in an over \$400 million budget to divest the City from fossil fuels wherever possible. It is the bare minimum of what the City should be doing to minimize its reliance on fossil fuels. In addition, hundreds of other municipalities are taking the step to divest from fossil fuel holdings. There is concern that it may not be possible to adhere to what the ordinance states related to the indirect holdings language. There is also a possibility that there could be significant costs to the city in the future. Several members would support the ordinance without the indirect holdings limitation or with a further understanding of what the ramifications are to future investments and the costs to the City if this ordinance is approved.

The Chair asked for public comment on the item. David Backer, Page Road, stated that it seems like there is only a small percentage of the City's investments that would be affected. He urged the committee to support the ordinance amendment. It is an important step. Cory Alperstein, 19 Hibbard Road, added that there are a couple of things to keep in mind when thinking about this proposed amendment. Fossil fuels is not a good place to invest. She is not concerned that the City will lose money by removing itself from these types of investments. There are several entities doing evaluations and making recommendations on alternative investments. This ordinance is a step beyond symbolism, it is part of a larger picture, which Newton is moving towards. It is going to cost us as a city and community to move forward but we need to be united in the decision that there is nothing else that matters as much as this.

The Chair suggested consulting with the City's Law Department and the Investment Advisory Committee before taking any action on the proposed ordinance. The Committee would like responses to the following questions:

What impact would this ordinance have on the investment policy?

What constitutes investment in indirect holdings?

What are the consequences related to the indirect holdings language in the ordinance?

What financial impact does this ordinance have?

How does this ordinance limit the City in terms of what funds the City can invest in? For example, would it preclude the City from investing in the S&P 500?

If possible, the Committee would like a member of the Investment Advisory Committee to attend the next Committee discussion of this item. With that, Councilor Noel moved hold, which carried by a vote of four in favor and one abstention.

#534-18 Appropriate \$28,804 for McKinney-Vento Homeless Student Transportation
SCHOOL COMMITTEE requesting that the City Council approve authorizing the Mayor to appropriate the state reimbursement of twenty-eight thousand eight hundred four dollars (\$28,804) for McKinney-Vento Homeless Student Transportation from the general fund to the School Department.

Action: Finance Approved 5-0 (Gentile not voting)

Note: Comptroller Sue Dzikowski presented the request to appropriate \$28,804 from the City’s General Fund to the School Department’s Budget. The funds are an annual reimbursement from the State for the transportation of homeless students to and from shelters or temporary housing, which the School Department uses to offset bus transportation costs. The City receives a reimbursement of approximately 30% of the cost of that transportation.

Per the McKinney Vento Assistance Act, students have the right to continue attending their “school of origin”. The “school of origin” is the school where the student was last enrolled or the school the student was attending when they became homeless. If the student is still in the same district as the school of origin, the school district must provide transportation. If the student is not living within the district of the school of origin, the district of origin and the district where the student is living must determine how to share transportation costs and responsibility. If the districts cannot come to an agreement, then the districts share equally in the costs and responsibility.

Councilor Grossman moved approval, which carried unanimously.

#532-18 Assessment of Curb Betterments
COMMISSIONER OF PUBLIC WORKS requesting approval of the following mentioned sidewalk/driveway apron and/or curb betterments; said betterments to be levied under the provisions of MGL Chapter 83, Sec. 26, authorizing the assessment of betterments for construction:

Address	Owner Name	Book/Page	Sec/Block/Lot	Total Cost
51 Avalon Road	Rittenhouse Nancy E & Larson Dale N	1226/153	53014 0014	\$5,220.00
25 Ballard Street	Feder Miriam	65077/563	73030 0001	\$4,992.50
36 Brooks Avenue	Denison Sherman F & Susan Tars (Denison Realty Trust)	66381/362	21032 0008	\$2,185.00
33 Duxbury Road	Jennings Bruce E & Sybicki Joan	17325/397	62027 0001	\$2,347.50

September 24, 2018 Report

#343-18 **Ordinance amendment to divest of funds from fossil fuel companies**
COUNCILOR NORTON proposing an ordinance amendment to divest the City of direct or indirect holdings in fossil fuel companies.

Action: **Held 7-0 (Rice not voting)**

Note: Chief Financial Officer Maureen Lemieux explained that she would join the Committee for this discussion, as the Treasurer was unable to attend the meeting. Councilor Norton explained that the idea of this docket item is to have the City to divest itself from investments in fossil fuels in any way it can. The City would then not be investing in something that is considered one of the biggest threats to the environment and climate change. Councilor Norton previously met with Treasurer Jim Reardon to discuss how to proceed with divesting from fossil fuels. The City's largest investment of funds is with the State's Pension Reserve Investment Trust. Unfortunately, the City cannot dictate to how the State invests those funds. Mr. Reardon explained to Councilor Norton that the City could only divest itself from fossil fuel investments where accounts are under the direct control of the City.

Ms. Lemieux informed the Committee that there are currently two investment accounts under the City's control. The first is the Workers Compensation Account, which currently holds approximately \$13,000,000, with 5.9% invested in energy companies and the second is the Newton North High School Fund, which contains approximately \$875,000 with about \$12,000 invested in energy companies. Ms. Lemieux does not know how difficult is to divest itself from the investment in the energy companies. Councilor Norton stated that she asked Mr. Reardon, who believes that it would not be too difficult to divest and that it would not have a material effect on the rate of return. He would contact that fund manager and state that the City wants a portfolio with no investments related to fossil fuels.

A Committee member pointed out that there may be a challenge in remaining divested from fossil fuels as investment managers buy and sell stock each day. It would require the Treasurer to monitor the investments on a regular basis to ensure that the City remains divested. There was a suggestion that the City provide investment companies with a list of identifying specific companies not to invest in rather than making a blanket statement to investment companies not to invest in fossil fuel companies. Committee members would like to know what the best way is to define and identify what the City is divesting from, as many energy companies also provide clean energy like solar power that the City should encourage.

Committee members had a number of questions related to the item and would like to discuss the docket item with the Treasurer. Councilor Noel moved hold on the item until the Treasurer can join the Committee for the discussion. The motion was supported unanimously.

CITY OF NEWTON
LAW DEPARTMENT
INTEROFFICE MEMORANDUM

To: Councilor Gentile, Chair, and Members of the Finance Committee
From: Maura O’Keefe, Assistant City Solicitor
RE: Docket Item # 343-18; Divestment of Funds from Fossil Fuels
Date: May 29, 2019

Introduction

The Law Department has been asked to comment on 1) the purpose of the reference to Carbon Underground 200 in the draft ordinance concerning divestment of funds from fossil fuel companies; and 2) how information provided by Carbon Underground 200, or similar indexes, may impact the decisions of the Treasurer in connection with the proposed ordinance.

Defining a Fossil Fuel Company

Information provided to the Law Department in the early phases of this project proposed to prohibit continued investment in any company that is involved in the oil or gas industry or in the construction of oil and gas pipelines. By this plain language, the ordinance would have created exclusions that cast a net so wide that the ordinance would have been rendered practically unenforceable.

As general rule of legislative construction, it is poor drafting to create a law with undefined or ill-defined parameters. The law must be clear as to the conduct that is forbidden. The general public must be able to understand what behavior will run afoul of the ordinance so that the requirements of the law can be equitably enforced.

Here, the initial proposed definition was so broad and vague as to give rise to the possibility that almost any manufacturing or construction company could possibly be defined as a fossil fuel company and, therefore, risk divestment of municipal funds. With such a broad definition, unintended consequences would surely arise.

To combat this, the definition of a fossil fuel company must be tethered to some standard, preferably one that enjoys wide industry acceptance. To achieve this, reference is made in the current version of the proposed ordinance to the Carbon Underground 200, one of several companies that provide financial research to investors seeking to embrace low-carbon investments.

Carbon Underground 200 provides investment information for entities seeking to divest from fossil fuel companies. Carbon Underground 200 is one of several investment tools under the umbrella of Fossil Free Indexes, LLC which conducts research into publicly owned companies in order to provide rankings and analysis concerning coal, oil, and gas reserve owners. Carbon Underground 200, in particular, provides a list of coal, oil and gas companies ranked by the carbon emissions contained in their reserves.

With the information provided by an index such as Carbon Underground 200, the Treasurer would be equipped to evaluate whether a company is engaged in the business of fossil fuel such that investment in that company would be prohibited under the ordinance.

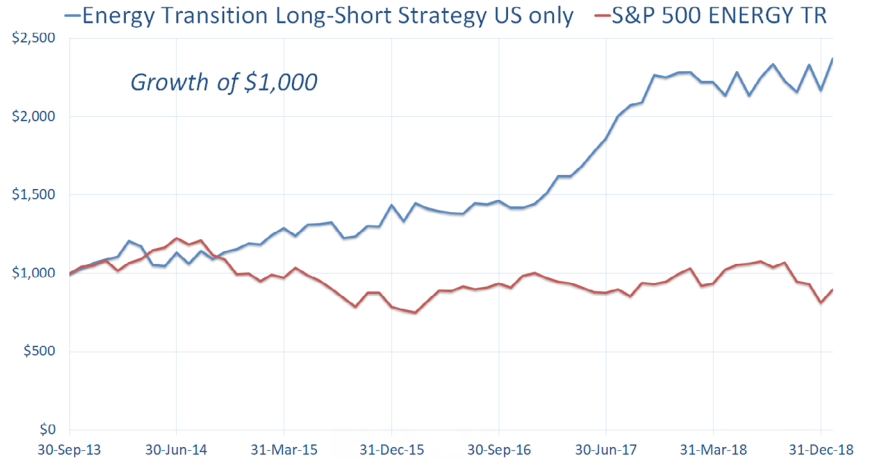
The inclusion of Carbon Underground 200 is not the only possible solution to the problem that arises with appropriately defining the prohibited conduct in the proposed ordinance. The Law Department stands prepared to work with the Committee to find alternate proposals and solutions if the Committee decides to pursue an ordinance to divest funds from fossil fuel companies.



Investment Solutions for the Energy Transition

FFI provides financial products and services that enable investors to navigate the risks and opportunities created by the transition from fossil fuels to renewable energy.

Our team of finance and investment professionals, combined with our network of industry partners, allows FFI to deliver robust, transparent, and pragmatic solutions for institutional investors and asset managers who seek to reposition their portfolios in preparation for the clean-energy economy.



Carbon Risk and Research Solutions

FFI provides robust screening and engagement tools for institutional investors focusing on public companies owning fossil fuel reserves. The foundation of these tools is our research that produces a deep view of each reserve owner’s exposure to the energy transition. We cover over 600 global publicly-traded companies capturing both reserves and financial data. Our solutions include internationally recognized rankings that are used by investors and asset managers to exclude securities from portfolios. We also offer customized solutions and advisory services tailored to an investor’s unique objectives and constraints.

The Carbon Underground

Our family of carbon emissions rankings are the widely accepted standard for screening reserve-owning fossil fuel companies. These rankings help asset managers, and asset owners assess and mitigate carbon risk in their portfolios and funds. The most recognized list, The Carbon Underground 200™ (CU200), ranks the top global 200 publicly-owned coal, oil, and gas reserve owners by the carbon emissions embedded in their reserves.

Core Subscription Services– FFI offers subscriptions to the Carbon Underground family of rankings: The Carbon Underground 200, The Tar Sands 20, The Coal 100, The Oil and Gas 100, and The Carbon Underground universe of over 600 global publicly-traded companies. The service provides quarterly updates of rankings, emissions, corporate actions, global cross-exchange equity issues and security identifiers.

Custom Screening and Advisory Services– FFI offers customized rankings that can be tailored to an investor’s unique objectives. These custom rankings can be based on additional factors such as fuel type (e.g., different coal types), production data, financial data and exposure to commodity prices. FFI also provides advisory services to help institutional investors establish policies and implement strategies that help to align portfolios with their institutional mission.

Energy Transition Index and Strategy Solutions

FFI index benchmarks and investment strategies are designed to deliver a transparent and cost-effective method of incorporating the energy transition theme into a portfolio.

FFI Indexes– Our Fossil Free Indexes US (FFIUS/FFIUSTR) track the broad, large-cap US market, screened for the CU200 companies. They are available to be licensed as reference indexes for investment funds. Our index construction team offers customized index solutions tailored to investors’ unique objectives and constraints.

Investment Strategies– FFI, together with partners Clean Edge, Inc. and Alpha Vee, Inc., has created the Energy Transition Long-Short (ETLS) Strategy, a rules-based investment strategy that is long publicly-traded clean energy companies and short fossil fuel reserve owners. ETLS is a pioneering liquid alternative investment constructed to capture the potential upside of a transition to a low-carbon economy.

Custom Development– FFI partners with other asset managers and investors to utilize its research in the creation of custom financial products that can be used to deliver alpha or provide a hedge to the risks associated with an energy transition.

Have a question?

Call us at: +1 (646) 568-5900
Email us at: info@fossilfreeindexes.com

Find us on the web at: www.fossilfreeindexes.com
Twitter: @FossilFreeIndxs

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CU200 Methodology

- Updated quarterly
- Rankings based on calculated carbon emissions data using most recent reported reserves as of calendar quarter end
- Rankings adjusted based on company mergers and acquisitions following the most recent reserve reports

Reserves Data Sources

- Reserves data sourced from internationally recognized data providers

Reserves Categorization

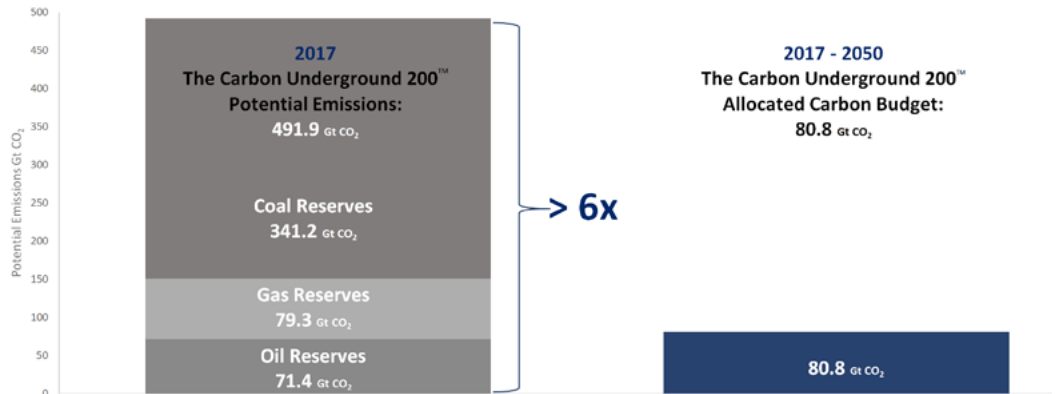
- Coal reserves type classification: anthracite, bituminous, sub-bituminous, and lignite
- Coal reserves use classification: thermal, metallurgical, and PCI
- Petroleum reserves classified into oil, natural gas liquids, oil sands, and gas

Reserves Definitions

- Coal reserves reported as the sum of proven and probable reserves
- Coal reserves allocated to listed companies based on reported percentage ownership of individual mines
- Oil and gas reserves reported as proven (1P) reserves, net of royalty payments

CO₂ Emissions Calculation

- Based on the IPCC Revised 1996 Guidelines
- Follows the Meinshausen approach from the Potsdam Institute for Climate Impact Research
- IPCC carbon content factors assigned based on reserve type
- Reserves figures converted into gigagrams using average factors specific to each type of fossil fuel



The Carbon Underground 200™ (CU200) is the internationally recognized standard for screening reserve-owning fossil fuel companies and mitigating investment climate risk. The CU200 list ranks the top global 200 publicly-owned coal, oil, and gas reported reserve owners by the carbon emissions embedded in their reserves. The CU200 coverage includes:

- Publicly-listed companies reporting ownership of fossil fuel reserves
- Separate rankings for the top 100 public coal companies globally and the top 100 public oil and gas companies globally that have reported reserves
- The Carbon Underground Coal 100 covering 98% of reported proven and probable coal reserves from publicly listed companies
- The Carbon Underground Oil and Gas 100 covering 98% of reported proven gas reserves and 97% of proven oil reserves held by publicly-listed companies

Deployed globally, the CU200 serves as a robust screening and engagement tool that enables investors, asset managers and advisors to perform many activities associated with climate change and fossil fuel aware investing including:

- Target coal, oil and gas companies for exclusion based on emissions and/or the risk of stranded assets
- Measure and monitor fossil fuel exposure in investment portfolios
- Track and report institutional investor compliance mandates
- Engage corporate boards and issuers on climate and stranded assets risks in their operations and financials
- Create bespoke climate and carbon-focused portfolios based on an investor's unique preferences and constraints
- Enhance ESG integration and ratings processes
- Create custom indexes and financial products that allow investors to manage risks associated with the transition to the low carbon economy

About Data Provider: FFI

FFI enables investors to measure and mitigate the risks associated with climate change. We license rankings and indexes and also provide advisory services for asset managers and institutional investors seeking to create policies and strategies consistent with the transition to a low-carbon economy.

Email: info@fossilfreeindexes.com

Web: www.fossilfreeindexes.com

Twitter: [@FossilFreeIndexs](https://twitter.com/FossilFreeIndexs)

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Creating The Carbon Underground 200: Methodology

Introduction

We have used a reserves-based methodology to create The Carbon Underground 200, our list of the top global 200 publicly-owned oil, gas, and coal reserve owners ranked by the carbon emissions embedded in their reserves. This approach follows that of Meinshausen from the Potsdam Institute for Climate Impact Research.²⁹ It is largely consistent with the methodology reported to be the basis of the original list published by the Carbon Tracker Initiative in 2011 and used by the fossil fuel divestment campaign launched in 2012.³⁰

Reserves Data Sources

The core data underlying The Carbon Underground 200 is based on reported reserves.

For coal, S&P Global Market Intelligence is utilized as the primary provider of reserves data.

For oil and gas, Evaluate Energy with its Global Oil & Gas Database (“EE Oil & Gas Database”) and CANOILS Database (“EE CANOILS Database”) is utilized as the primary provider of reserves information.

In each case, data from the coal and oil and gas data providers were validated against, and in some cases supplemented during the analysis with, data from publicly-available primary sources and from other secondary data providers. The primary use of supplemental data was to provide support for estimating the kind of coal predominating in a mine.

Reserves Definitions and Approach

Coal reserves are reported in the S&P Global Market Intelligence Coal Database as the sum of proven and probable reserves. Reserves are the economically mineable portion of a measured or indicated resource. The reporting of reserves by coal mine on an annual basis is not consistent among companies with exchange listings, nor is it consistent for each mine in which a company has a controlling interest. Due to the sporadic reporting of reserves by listed companies, this analysis uses the last reported reserves amount by mine following a reasonableness test as part of the due diligence described above. Reserves were allocated to listed companies based on percentage ownership of individual mines.

Oil and gas reserves are distinguished between proven (1P) and proven and probable (2P). Proven reserves are defined in the oil and gas industry as having a 90% probability of near-term extraction, generally accepted to be within 10-15 years. Probable reserves are defined as having a 50% probability of extraction. This analysis uses proven reserves (1P) as the basis for ranking the top 100 oil and gas companies. Most oil and gas companies report proven reserves, while fewer than half of the public oil and gas companies report proven plus probable reserves. This research does not include any portion of probable oil and gas reserves, nor does it include any status quo assumptions of continued discovery and development to replenish oil reserves as they are utilized, both of which would increase the potential CO₂ emissions from these firms. In order to maintain a consistent data set, oil and gas reserves data are represented net of royalty payments. Royalties are the government’s share of a company’s reserves, and vary by country and by project. The convention to represent reserves data net of royalties is consistent across all Evaluate Energy databases.

Data Coverage

The calculations used to produce this fourth edition of The Carbon Underground 200 are based on reserves data available as of July 31, 2017. Corporate actions through September 22, 2017 are included. The Carbon Underground Coal 100 covers 98% of proven and probable coal reserves from listed companies. The Carbon Underground Oil and Gas 100 covers 98% of proven gas reserves and 97% of proven oil reserves held by investable companies.

The majority of proven oil and gas reserves are held by state-controlled companies, whose data are unavailable to investors. However, some state-controlled companies do turn to the equity markets to raise capital. There are 21 state-controlled companies, accounting for about 60% of the total CO₂ emissions, in The Carbon Underground Oil and Gas 100.

Emissions Calculation Process

The Carbon Underground 200 relies on the IPCC Revised 1996 Guidelines for National Greenhouse Gas Inventories³ as a methodological framework. The calculation of CO₂ emission potential requires several conversions to the raw reserves figures.

Categorization

Coal reserves are divided into five categories and petroleum reserves into four categories as follows:

Coal	Petroleum
• anthracite	• oil
• coking coal (metallurgical)	• natural gas liquids
• bituminous coal (thermal, PCI)	• oil sands
• sub-bituminous coal	• gas
• lignite	

In cases where the S&P Global Market Intelligence database does not indicate the coal rank for a specific mine, all available sources of information are used to estimate the coal rank, including the coal use and the predominant rank of coal in the basin, the coalfield, the state or province, the region, and/or the country. In cases where none of these sources provided sufficient information to estimate the coal rank, the most common global coal rank, bituminous, was assumed.

Evaluate Energy reports oil and natural gas liquids in aggregate. Reported annual production figures for oil and for natural gas liquids are used to estimate the relative proportion of oil reserves to natural gas liquids reserves. Additionally, where proven (1P) reserves are unavailable (five of the top 100), they are estimated using proven and probable (2P) reserves and a ratio based on the mean relationship between 1P and 2P for the companies that report both.

Normalization

Coal reserves are universally reported in millions of tonnes. Petroleum reserves are reported in a variety of volume units. All reserves figures are converted into gigagrams using average factors specific to each type of fossil fuel.

Energy and Carbon Content Factors

Fossil fuels vary widely in energy potential and carbon content across reserve types. Following the IPCC framework, net calorific values are assigned to each reserve type, to convert mass into energy units. IPCC carbon content factors indicating the amount of carbon released during combustion are assigned based on reserve type.

CO₂ Emissions Calculation

Potential CO₂ emissions for reserves reported by each company are calculated based on the IPCC framework and the Potsdam Institute for Climate Impact Research formula

$E = R \times V \times C \times F$ where E = emissions, R is reserves, V is net calorific value, and C is carbon content. F is a conversion factor accounting for transforming carbon into carbon dioxide and converting grams to gigatons.

Listed Companies

Given the continual mergers and acquisitions, closures, de-listings, and IPO activities in the coal, oil, and gas industries, this work is an ongoing best-efforts attempt at researching listed companies and basing the analysis on the latest available information. If subsidiaries are listed separately from their parent, and their reserves are reported separately from their parent, they are eligible to be included in The Carbon Underground 200. Companies that publicly trade only a portion of their overall shares are eligible to be included, as well.

Constructing the List

Separate rankings are created for the top 100 public coal companies globally and the top 100 public oil and gas companies globally. The rankings are based on calculated carbon emissions data using reserves reported as of July 31, 2017. The ranking is then adjusted based on company mergers and acquisitions following the most recent reserve reports.

Data Accuracy

FFI has utilized best efforts to include the most recent and consistent data available. Reserves data and company ownership interest data are only as accurate and as timely as the data contained within company reports. While starting with reserves database suppliers, a data verification process including a check of a sample of data points against primary sources was conducted. Going forward, each update to the list will incorporate the most recent data available at the time.

DRAFT: Divestment of Funds from Fossil Fuel Companies.

Purpose: The City of Newton strives to support sources of sustainable energy and to combat climate change caused in part by the use of fossil fuels. By this Ordinance, the City intends to take steps to diminish, and then eliminate, its contributions to the financial support of companies that engage in the production, sale and exploration of non-renewable fuel. This Ordinance provides a method for the conscientious investment of City funds under the direct, immediate control of the Treasurer for the purpose of promoting clean energy policy goals for the benefit of the residents, while still fostering fiscal health and welfare.

1) Definitions:

Divest: to sell, redeem, transfer or otherwise dispose of investments.

Investment: the purchase, ownership, or control of publicly issued stock, corporate bonds or other debt instruments issued by a company.

Fossil fuel company: a publicly traded company that holds oil, gas or coal reserves in such quantities so as to be listed with a fossil fuel divestment index, ~~such as the Carbon Underground 200, or other similar, professionally researched resource~~ relied upon by the current manager of the Fund.

2) Within one year of the enactment of this Ordinance, the Treasurer will divest 50% of the Newton North High School Fund, ~~and~~ the Workers Compensation Fund and the Newton Commonwealth Fund from fossil fuel company investments. Within two years of the enactment of this Ordinance, the Treasurer will divest 100% of the Newton North High School Fund, ~~and~~ the Workers Compensation Fund and the Newton Commonwealth Fund from fossil fuel company investments.

3) The Treasurer will refrain from making additional or new investments in fossil fuel companies for the Newton North High School Fund, ~~and~~ the Workers Compensation Fund and the Newton Commonwealth Fund.

4) The requirements of this Ordinance shall only apply to the Newton North High School Fund, the Workers Compensation Fund and the Newton Commonwealth Fund.

4) Nothing in this Ordinance will require the Treasurer to take any action if it conflicts or is inconsistent with the fiduciary duties and prudent person standard of care as defined by statute and the Investment Policy of the City of Newton.