



City of New Haven
Office of Management and Budget
Justin M. Elicker, Mayor
Michael Gormany, City Budget Director and Acting Controller

Notice of Energy Committee Meeting

DATE: Thursday, November 10, 2022

LOCATION: Zoom

Agenda Items

1. Approval of Meeting minutes from July 15, 2022 Meeting (PDF Page 3-6)
 - a. Present: Michael Gormany
 - i. Action: Approval from committee
2. Market update and budget guidance (PDF Page 7-10)
 - a. Present: Source One
 - i. Action: Information only
3. Hedging recommendations for winter 2022/2023 (PDF Page 7-10)
 - a. Presenter: Source One
 - i. Action: Committee to vote on authorization to decision to lock or float
4. Renewable Energy Credits and carbon goals Presenter: Giovanni Zinn (PDF Page 7-10)
 - a. Presenter: SourceOne
 - i. Action: Committee action on whether to buy additional green-e renewable energy credits to meet sustainability goals and;
 - ii. Decision to sell renewable energy certificates from City Fuel Cell.



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Zoom Link

<https://newhavenct.zoom.us/j/86440826734?pwd=djZqT0tqd1pMMEh0MXRyNjl4R2wxZz09>

Hi there,

Michael Gormany is inviting you to a scheduled Zoom meeting.

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Meeting Minutes Friday, July 15, 2022 of Energy
Committee Via Zoom

Committee Members Present

1. Michael Gormany, Acting Controller
2. Salvatore Decola, Aldermanic Representative
3. Steven Winter, Aldermanic Representative
4. Giovanni Zinn, City Engineer
5. Michael Fumiatti, Purchasing Agent

Other Attendees

1. N/A

Meeting Minutes

- Call to order of the meeting by Michael Gormany at 2:07PM
- Gormany begins discussion on agenda items #1, 3, and 4. The items will not be discussed due to an unforeseen emergency by SourceOne representative Brant Davis. The items will be discussed and voted on (if stated on the agenda) at the next meeting
- Gormany begins discussion on item #2, City of New Haven Fuel Cell and turns the discussion over to Giovanni Zinn
- Zinn begins the presentation on the City of New Haven Fuel Cell (attached PDF)
 - Zinn had a meeting with the company that owns the current fuel cell here that serves the government Center complex earlier this week.
 - Zinn initially thought the City was going to tell them that the City was not interested but it's an attractive proposal here.
 - The current fuel cell is, at the end of its life we're also at the end of our initial term of 10 years.
 - VFS is going to bring in another fuel cell system that is refurbished, one that a newer model and has good stack life left and works well.
 - Reluctant to do a ten-year agreement
 - Comparing the cost of a new fuel cell would be significantly higher than the \$20,000-\$25,000 per month
 - Also, we [the City] are trying to decarbonize our city buildings and in the meantime, this does present a good opportunity to for co-generation I think it's a lower carbon source, rather than sort of what the alternatives would be.
 - Fairly attractive financial performance, of course, you must predict what's going to happen with energy prices in the future. and specifically the interaction between natural gas prices and electricity, the Northeast is increasingly tied to natural gas



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prices for its electricity prices, so you know I think it's a fairly safe contract in the sense that we're tied in some of our financial business side of the natural gas price versus what we would be paying if we were just buying electricity, and that is, you know those to track each other very closely now in the northeast.

- The way that this deal would work is that we would extend the deal, through the December of 26 timeframe, which is what the board of all this is authorized this committee to purchase electricity and energy services.
- The assumptions that they're making on our electricity prices 19 cents a kilowatt hour, which I think is conservative number and also 6.2 dollars a therm
- The Fuel Cell has saved money in the past and the City has received renewable energy certificates of about \$80,000
- the cost is still robust at \$39 a megawatt hour renewable energy credit is what they.
- The vendors projections are reasonable, and the City would save around \$250,000 a year
- I think it makes sense financially it's in a fairly good shape it's within the purview of this committee and doesn't lock us in so far out that it starts to interfere with our longer-term goals on energy to transition away from fossil fuels, but really represents kind of a lower carbon bridge here for us so with that if anyone has any questions, I would be happy to answer
- With that any questions
- Gormany ask for any questions from committee members starting with Alder Decola
- Alder Decola
 - No, I read it, we have a savings and that's a good day.
- Gormany refers to Alder Winter for questions
- Alder Winter, How does, how does the gas price compared to current gas prices and the gas prices that we think are you know, maybe coming.
- Zinn, I think the gas prices is a current one i'm., predicting gas prices in the future is difficult, as you will know. However, gas prices and electricity prices track very closely and, in the northeast, so that. If we didn't do this and we were just buying electricity that prices well would track gas prices relatively close.
- Gormany, mentioned Source One is a good resource for discussion on Gas prices and prediction of the market
- Giovanni Zinn and Alder Winter continued discussion on Market Rates
- Alder Winter asked the question on what the breakeven point if the City were to spend \$25,000 on something else, i.e., Solar
- Zinn and Alder Winter continued discussions on Solar panels and any alternative options to the fuel cell plus cost.
- Zinn and Alder Winter continued discussions on cost of solar panels, gas prices, and electricity cost.
- Gormany asked if Mr. Fumiatti had any questions



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- Fumiatti none
 - Gormany began the motion needing approval
 - Based on the energy committee purview, committee approval is requested to enter into the multiyear agreement [extension as mentioned by Giovanni Zinn] for the mayor to enter into a multiyear agreement for the fuel cell as outlined, based on the presentation specifications, and for the Mayor to execute all documents and amendments related to the fuel cell
 - Alder Decola moved the motion
 - Fumiatti Seconded
 - Unanimous approval 5-0
 - Motion for Adjournment
 - Fumiatti Moved
 - Alder Decola Seconded
 - Unanimous 5-0 Approval
 - Committee also thanks Michael Fumiatti for his years of service with the City and a happy retirement
-



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Agenda

Action Items requiring a vote

1. Hedging recommendations for winter 2022/2023
 - a. Presenter: SourceOne
 - b. Action: Committee to vote on authorization for buying power for the 2022 upcoming winter

2. City of New Haven Fuel Cell
 - a. Presenter: Giovanni Zinn
 - b. Action:** For the City of New Haven to execute a multi-year agreement, as authorized via the energy committee ordinance, with VFS, to replace the existing fuel cell, and provide updated infrastructure and energy.

Information Items

3. Market update and budget guidance
 - a. Presenter: SourceOne

4. Renewable Energy Credits and carbon goals

Agenda

1. Market update and budget guidance
2. Hedging recommendations for winter 2022/2023
 - a. decision to lock or float
3. Renewable Energy Credits and carbon goals
 - a. Decision to buy additional green-e renewable energy credits to meet sustainability goals, and
 - b. Decision to sell renewable energy certificates from City Fuel Cell.)

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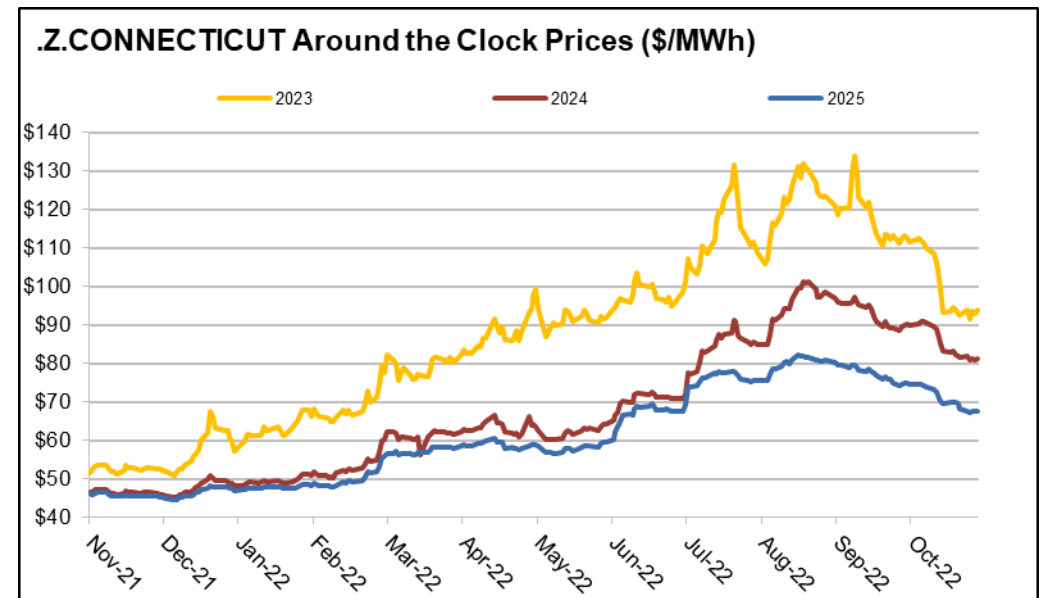
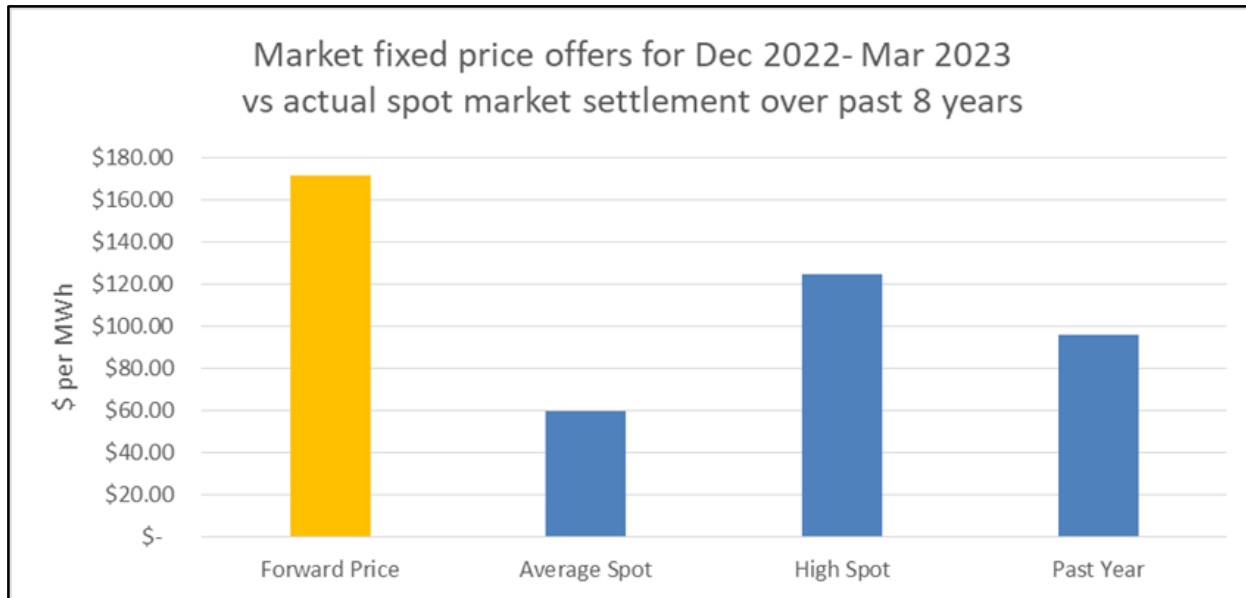
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Market Update

- Power and gas markets experiencing highest prices and volatility in ~ 15 years
 - Lower prices in 2019/2020 > and deterioration of drilling activity > small imbalance of production concurrent with surging demand, particularly from industry and manufacturing
 - CONH's commodity budget ~ \$9.8M is under threat of a +\$2.2M increase



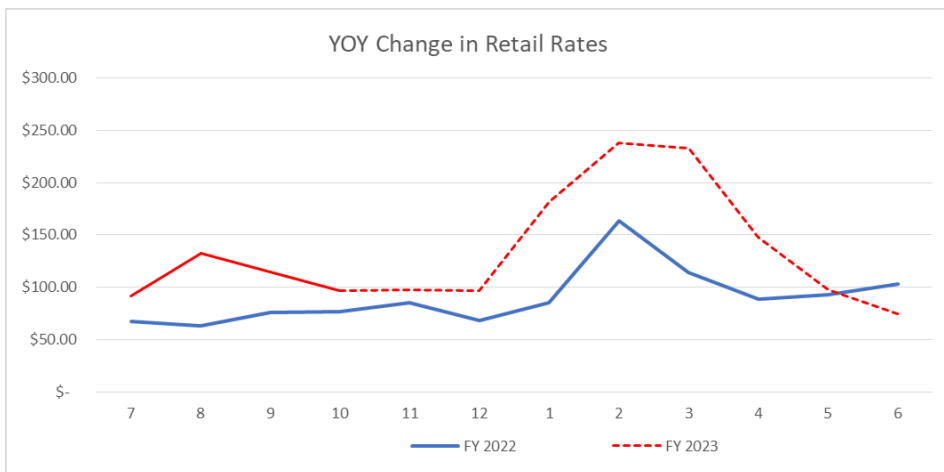
Summary of Market Impact

Background

- Prices for wholesale energy have more than doubled over the past year
- The City of New Haven could be looking at a financial impact of +\$2.2M yoy but current volatility implies are variance of +\$1-3M

Agenda # 1: Does the City wish to mitigate its electric budget exposure by locking a portion of this upcoming winter?

- Typically we go out to the market to hedge in the fall, with a target of about 75% from Dec – Mar.
- The current premiums on that power, in our opinion justify a hedge of 50% - 75%
- Recommendation: a hedge of 65% will provide CONH protection against some of the worst outcomes however avoid some of the large market premiums currently baked into the futures market.
- By hedging a higher %, CONH locks in certainty for the Nov 2022 – June 2023 period but also forgoes potential downside movements in the market



		Winter Hedge Coverage				
		0%	30%	60%	75%	100%
Sigma	Best Case (-2σ)	\$ 3,075,128	\$ 3,391,685	\$ 3,708,242	\$ 3,866,521	\$ 4,130,319
	Forecast Case (-0.5σ)	\$ 4,193,807	\$ 4,272,946	\$ 4,352,085	\$ 4,391,655	\$ 4,457,605
	@Market (0σ)	\$ 4,566,700	\$ 4,566,700	\$ 4,566,700	\$ 4,566,700	\$ 4,566,700
	High Case (1σ)	\$ 5,312,486	\$ 5,154,207	\$ 4,995,929	\$ 4,916,789	\$ 4,784,890
	Worst Case (2σ)	\$ 6,058,272	\$ 5,741,715	\$ 5,425,157	\$ 5,266,879	\$ 5,003,081

Renewable Energy Credits

Agenda # 2: Does the City wish to sell the Renewable Energy Credits generated from the City Fuel Cell?

- The City is still generating Class I RECs from the City Fuel Cell.
- We estimated that it will have generated about 1700 RECs by the end of the year. At current market prices, this would have a market value of about \$57,000. (\$34 per)
- Recommendation: authorize Veolia to solicit bids and market the RECs at market prices. The City would ultimately need to execute the final contract however.

Agenda #3: Does the City wish to continue buying Green-E RECs to support its carbon offset goals?

- The City purchased Green-e RECs for 80% of its consumption back in 2020, but only for 2021 and 2022.
- If the City wishes to continue with its green commitments, it will need to extend those contract at approximately ~ \$100,000 in 2023 based on current market pricing.
- This decision does not need to be made until later in 2023 but it may chose to do this now and commit to buying RECs until the end of its contract (~\$100k - \$150k per year for 2023 and 2024).