

11 October 2019

Via eFiling system

Mr. Patrick Wruck
Commission Secretary
BC Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Mr. Wruck:

**Re: Creative Energy Vancouver Platforms Inc. (Creative Energy)
British Columbia Utilities Commission (BCUC, Commission)
Application for a Certificate of Public Convenience and Necessity For Beatty-Expo Plants
and Approval of Corporate Reorganization (Application)
Project No. 1598962**

Creative Energy writes to enclose its response to Commission Panel Information Request (IR) No. 1 on the Specified Scope in accordance with Exhibit A-35 in the above noted proceeding.

Yours sincerely,



Rob Gorter
Director, Regulatory Affairs and Customer Relations

Enclosure

Creative Energy Vancouver Platforms Inc.
Application for a Certificate of Public Convenience and Necessity for the Expo and Beatty Plant Project
and Approvals Related to Reorganization

CREATIVE ENERGY RESPONSE TO PANEL INFORMATION REQUEST NO. 1 ON THE SPECIFIED SCOPE

**1.0 Reference: CONTINGENCY PLAN
Exhibit B-28, BCUC IR 4.1
Boiler #6**

In response to the British Columbia Utilities Commission's (BCUC) Information Request (IR) 4.1, Creative Energy Vancouver Platforms Inc. (Creative Energy) states:

At a high level, the sequence and approximate duration of the major tasks is as follows:

Shutdown #1

Prior to July 1st

- Decommission Plant
- Re-build west plant wall
- Abatement of Boilers and balance of plant
- Relocate Boiler #5 & other equipment

Following July 1st

- Construct temporary flue for Boiler #5
- Tie-in Boiler #5 and other equipment (mainly feedwater pumps)
- Connect temporary power to Boiler #5 and other equipment
- Hydrostatic testing and flushing of new steam and feedwater piping

...

This sequence puts the critical work in advance of July 1st, to the extent possible, and minimizes the dependency on delivery of unique or long-lead items in the latter half of the shutdowns...

This approach minimizes the chance of the critical path being disrupted between July 1st and the restart of the Beatty Plant each year.

...

Moreover, it is important to understand that Boiler #6, which has a functional capacity of 170,000 PPH is largely untouched throughout the shutdowns. The risk of a failed restart of the Beatty Plant is almost entirely mitigated by (i) the in-service Expo Plant, and (ii) the general preservation of Boiler #6. Boiler #6 is the newest boiler in the plant, is in excellent working order, can be driven with a steampowered forced draft fan and a steam-powered feedwater pump (located underneath the boiler) and a freestanding flue adjacent the boiler and to the East.

It is entirely reasonable to assume that Boiler #6 can be fired following Beatty Shutdown #1, noting that the only Boiler #6 connections being touched during the shutdown are the feedwater connections and the electrical power, and any issue with either of those connections can be remedied in a very short timeframe. [Emphasis added]

- 1.1 Please explain in detail how Boiler #6 will be recommissioned in the event of a failed restart of the Beatty Plant and provide a description of the work to be completed in order to have the boiler operational. Please outline the timeline under which this will be completed.

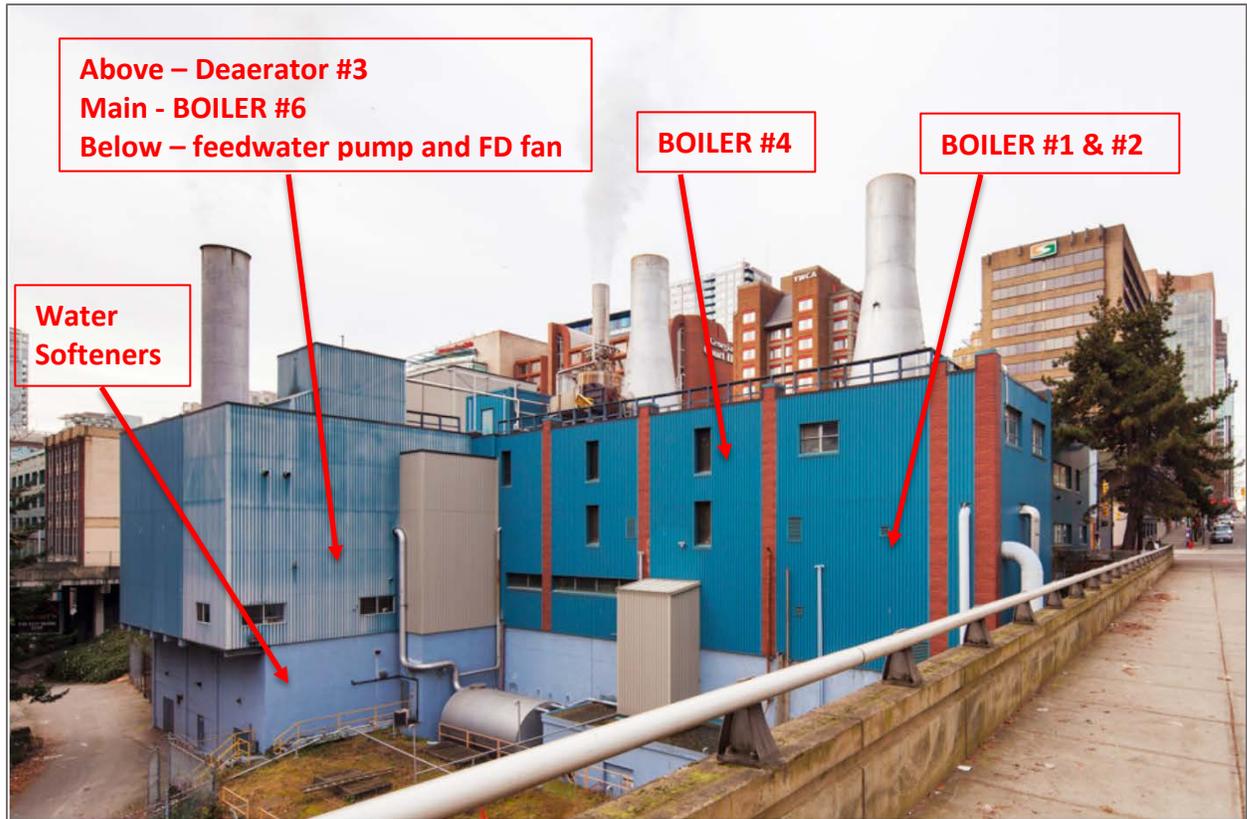
RESPONSE:

First, for total clarity, Boiler #6 will not be touched during the Proposed Project except as specifically described in this response. Boiler #6 will be temporarily shutdown, as it routinely is for maintenance, and will not be decommissioned or altered in any material way. The boiler will have some connections adjusted and will be available for restart in the month of September of each shutdown.

As background, Boiler #6 is a package of pressure vessel, furnace, refractory, burner, forced draft fan, gas train, exhaust breeching, water and steam piping, a control panel, and a large number of instruments and control devices.



This entire assembly is contained in a dedicated space within the building at 720 Beatty Street. This space was built around 1992 as an addition to the existing plant, specifically to house Boiler #6.



As outlined in the response to BCUC SS IR 4.1, the overall Beatty Plant restart risk is largely following the first shutdown, where abatement and demolition of certain components of plant, relocation of feedwater pumps, and relocation of Boiler #5 is performed. The overall Beatty Plant restart risk is minimal following the second shutdown.

The risk to Boiler #6 is much lower than the risks associated with other parts of the plant, as Boiler #6 is located in a completely separate part of the plant, away from where the abatement and demolition is being conducted.

In simple terms, in order to operate a steam boiler needs electrical power, a supply of makeup water, combustion air, natural gas or fuel oil, connection to the main steam header and appropriate breeching/ducting/flues to allow the release of the exhaust gases.

Below are notes on the extent to which these basic requirements will be impacted during the course of the first shutdown, specifically for Boiler #6

Impact of First Shutdown on Boiler #6

Electrical Power and Control Wiring

The boiler will require a 600V feed from the construction power system following the restart. This is typically accommodated with field-run cabling, designed and inspected by the electrical engineer. This will be coordinated during the detailed design phase, but there is great flexibility in terms of routing.

Control wiring will not be touched during either shutdown.

Makeup Water

Makeup water comes from the city water main on Expo Boulevard, travels through the water softeners, the deaerator, the feedwater pumps and then to the boiler(s). The water softeners are located underneath Boiler #6, require no abatement and will not be touched during either shutdown. The deaerator is above Boiler #6, requires no abatement and will not be touched during either shutdown. A number of the feedwater pumps must be relocated or removed during the first shutdown, but there is a dedicated feedwater pump immediately below boiler #6 which will not be touched during either shutdown.

Combustion Air

The combustion air for Boiler #6 enters from beneath the boiler, with no ducting. The air is pulled from the environment around the boiler via a forced draft fan which can be steam-driven. Provided the air in the plant has suitable openness to the outside, via louvres or other openings in the plant envelope, as it is in the current state, combustion air will be readily available throughout the project.

Natural Gas

The natural gas feed to the boilers will be relocated in advance of the first shutdown, as new connections must be made for the Expo Plant from Expo Boulevard, and to the Beatty Plant, via a new gas metering and pressure regulating station located in 701 Expo. These connections will be constructed and commissioned in advance of the first shutdown. Throughout the shutdowns, the natural gas connection to Boiler #6 will not be touched.

Fuel Oil

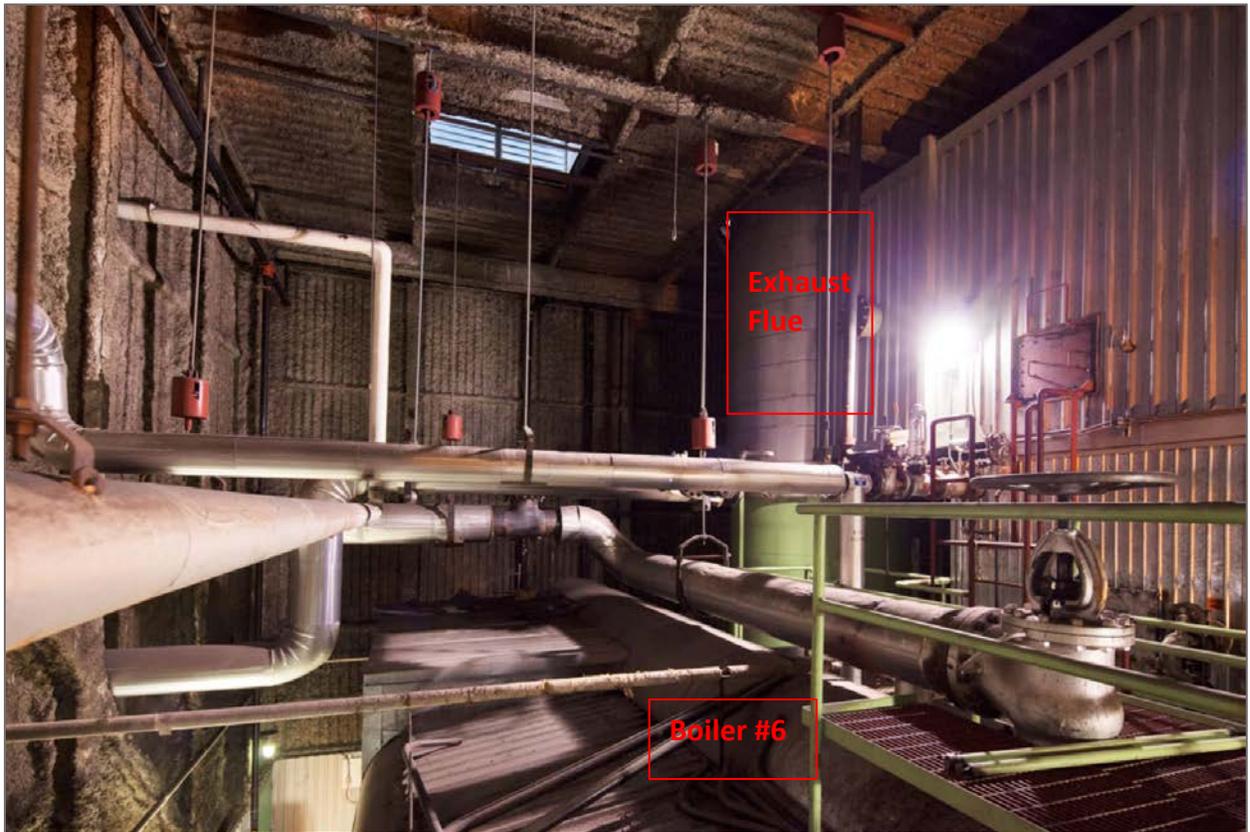
New Fuel Oil tanks and pumps located on 701 Expo will be installed during the below-grade construction of 701 Expo which occurs prior to commencing work on 720 Beatty. The fuel oil connections to the Beatty Plant, including Boiler #6 will be installed with the rest of the interconnection piping, prior to the first shutdown. The entire fuel oil system, aside from the connections to Boilers 1, 2 and 4 will not be touched during either of the shutdowns.

Steam Connection

The connection between Boiler #6 and the main steam header may require some abatement of the insulation during the first shutdown, as the steam header insulation does contain asbestos. The steel piping will not be disconnected or relocated. The supports for the piping will not be touched during the first shutdown.

Exhaust Flues

Boiler #6 has a dedicated flue located at the rear of the boiler. This flue is not being touched during the first shutdown.



The only changes in relation to Boiler #6 that could impact the ability to restart it are centred on the disconnection of power and timing of connecting temporary construction power to the boiler and completing the re-piping of the feedwater headers.

The construction power connections are a fine detail in the construction sequence which will be designed and scheduled during the detailed design. In any event, as the connections are temporary in nature, they can be installed quickly and would likely be scheduled to fall towards the end of the first shutdown, to minimize the potential for interference with abatement and demolition work.

The feedwater connections must naturally follow the abatement of the feedwater lines. This work will also be designed and scheduled during the detailed design, but as the dedicated feedwater pump for Boiler #6 is not being touched, Creative Energy fully expects that the feedwater piping for Boiler #6 can be isolated from the other feedwater piping, and re-instated at any point during the first shutdown if it was needed.

Given the low risks surrounding restart of Boiler #6, the minor work to restart the boiler, as described above, will likely be scheduled for 2 weeks in advance of the planned restart dates. As noted above, the work to restart Boiler #6 could be advanced if the boiler was needed, but the intent of this scheduling is to minimize the potential for interference with work underway in the other parts of the plant.

- 1.2 If required by the BCUC, please confirm, or explain otherwise, that Boiler #6 will be recommissioned and fully operational prior to the planned Beatty Plant restart date of September 16th.

The full Beatty Plant is planned to be restarted on September 16th. Further to the response to BCUC Panel IR 1.1, Boiler #6 could be restarted and fully operational in advance of that date within a couple weeks of an identified need to do so.

- 1.2.1 Please provide the earliest possible date on which Boiler #6 will be fully operational.

RESPONSE:

Please refer to the responses to BCUC Panel IR 1.1 and 2.1.

- 1.2.2 To ensure that Boiler #6 is fully operational prior to the planned restart of the Beatty Plant, please explain whether Creative Energy would need to reschedule any critical work that would impact the project schedule. If so, please provide details of the critical work rescheduled and the resulting risk to the project.

RESPONSE:

There is no need to reschedule any work, as there is no significant work being done in proximity to Boiler #6, aside from the work to adjust the connections to the boiler. Please refer to the response to BCUC Panel IR 1.1.

- 1.3 Please provide a detailed explanation of all work that is to be done to Boiler #6 during the shutdown.

RESPONSE:

Please refer to the response to BCUC Panel IR 1.1.

- 1.4 Please provide a detailed explanation of the work to be completed in the area around Boiler #6 during the shutdowns and confirm whether the work will be completed by the date provided in response to IR 1.2.1.

RESPONSE:

The work during the shutdowns is not in the spaces around Boiler #6, aside from the adjustment to the connections to the boiler as described in the response to BCUC Panel IR 1.1. The connections will be complete in advance of the September 16th planned restart date.

- 1.4.1 If not confirmed, please explain the risks to Creative Energy's ability to operate Boiler #6.

RESPONSE:

The risks to Creative Energy's ability to operate Boiler #6 are minimal and readily manageable. Please refer to the responses to BCUC Panel IRs 1.1 and 1.5.

1.5 In the event that Boiler #6 is required because of a failed restart of the Beatty Plant, please confirm that the boiler will remain in operation until a such time that it is no longer needed.

RESPONSE:

Confirmed.

1.5.1 Please explain what impact this would have on the project.

RESPONSE:

None. The risks to Creative Energy's ability to operate Boiler #6 are minimal and readily manageable. Please refer to the responses to BCUC Panel IRs 1.1 and 1.5.

1.5.2 Please explain whether Creative Energy can continue to safely advance with the work scheduled after the restart of the Beatty Plant with Boiler #6 in operation.

RESPONSE:

Absolutely, as this work is intended to proceed with the entire Beatty plant in operation. The work can surely advance with Boiler #6 in operation.

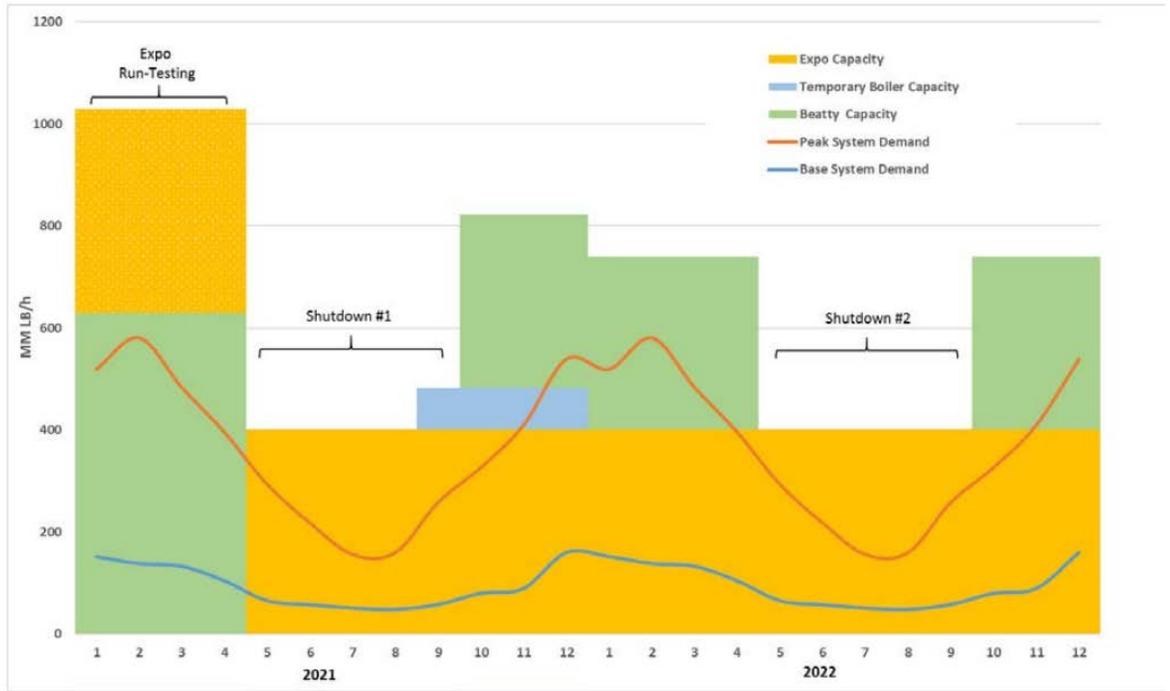
**2.0 Reference: CONTINGENCY PLAN
Exhibit B-28, BCUC IR 5.1
Peak Loads**

In response to BCUC IR 5.1, Creative Energy states:

In the scenario where Creative Energy is not able to restart the entire Beatty Plant on the planned restart date of September 16th, Creative Energy would nevertheless have 400,000 PPH of capacity available at the Expo Plant plus 82,500 PPH of temporary boiler capacity at 701 Expo Boulevard, 170,000 PPH of functional capacity expected from Boiler #6, and the option to bring in more temporary boiler capacity that would be available to serve customers within 10 weeks of placing the order.

The figure below depicts the capacity of the temporary boiler, presuming it is onsite for 4 months, commencing in September 2021. This scenario mitigates the incremental risk of a failed restart generated by the work being performed during Shutdown #1.
[Emphasis added]

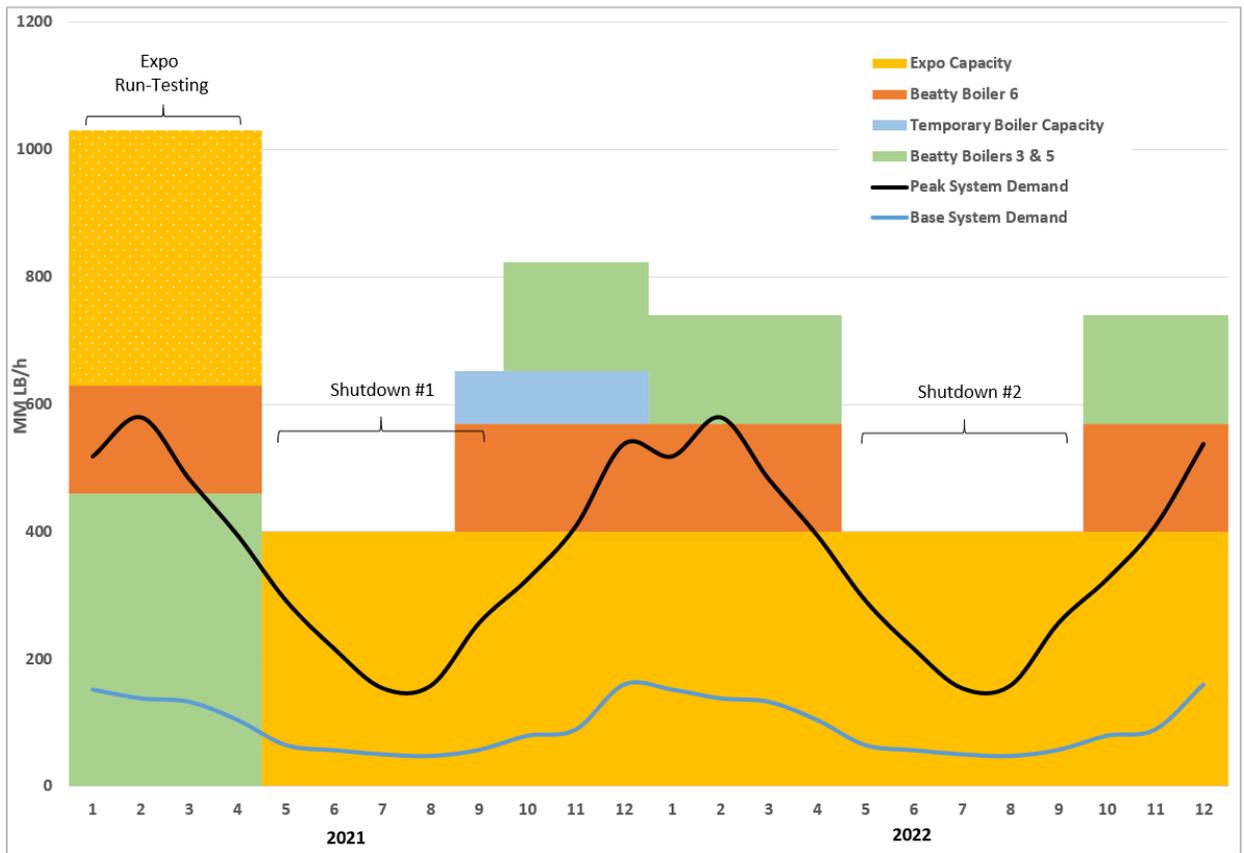
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2.1 Please update the figure above to separately illustrate the capacity of Boiler #6.

RESPONSE:

Please refer to the following chart.



2.1.1 For the same period, please provide a table comparing the actual peak load in pounds per hour (pph), the available boiler capacity (pph) and the peak load met by the available boiler capacity (pph and percentage).

RESPONSE:

Period		Forecast Peak System Demand [PPH]	Available Boiler Capacity [PPH]	Peak Load met by available capacity [PPH]	Peak Load met by available capacity [%]	Unused Capacity [PPH]
2021	Jan	519,000	1,030,000	519,000	100%	511,000
	Feb	580,333	1,030,000	580,333	100%	449,667
	Mar	483,000	1,030,000	483,000	100%	547,000
	Apr	395,000	1,030,000	395,000	100%	635,000
	May	292,667	400,000	292,667	100%	107,333
	Jun	217,000	400,000	217,000	100%	183,000
	Jul	155,000	400,000	155,000	100%	245,000
	Aug	159,000	400,000	159,000	100%	241,000
	Sep	257,500	652,500	257,500	100%	395,000
	Oct	326,000	822,500	326,000	100%	496,500
	Nov	409,000	822,500	409,000	100%	413,500
	Dec	538,500	822,500	538,500	100%	284,000
2022	Jan	519,000	740,000	519,000	100%	221,000
	Feb	580,333	740,000	580,333	100%	159,667
	Mar	483,000	740,000	483,000	100%	257,000
	Apr	395,000	740,000	395,000	100%	345,000
	May	292,667	400,000	292,667	100%	107,333
	Jun	217,000	400,000	217,000	100%	183,000
	Jul	155,000	400,000	155,000	100%	245,000
	Aug	159,000	400,000	159,000	100%	241,000
	Sep	257,500	400,000	257,500	100%	142,500
	Oct	326,000	740,000	326,000	100%	414,000
	Nov	409,000	740,000	409,000	100%	331,000
	Dec	538,500	740,000	538,500	100%	201,500