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Introduction

Microsoft Power BI is one of the most popular Data Visualization tools and a Business Intelligence Tool, and this tutorial explains everything about it.

Power BI is a collection of connectors, apps, and software services that work together for business users to convert large junk data into more meaningful insights. Typically, an organization gets its data from Text, CSV files, Excel spreadsheets, databases, data warehouses, or the cloud.

Microsoft Power BI lets you connect with all kinds of data sources to get your data. Transform data, model data, visualize (charts), and share them with anyone.

Microsoft Power BI is a cloud-based data analysis and analytics or reporting technology. It incorporates several powerful components, each having its own role in creating reports. For instance, connecting to data sources, data cleansing, analytics, calculations, sharing reports, consuming, etc.

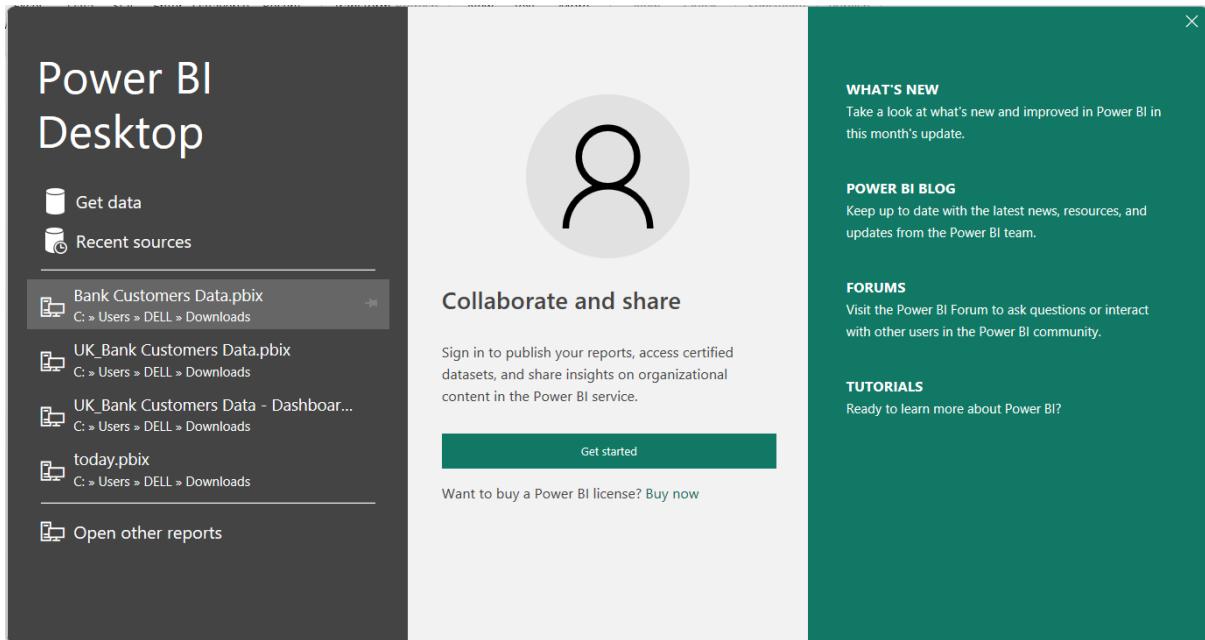
It also allows data analysts to publish reports for your organization. So that business users can access them using mobiles, tablets, etc. This Microsoft Power BI tutorial also explains these steps, so read this thoroughly to learn everything about this business intelligence tool.

Power BI Dashboard

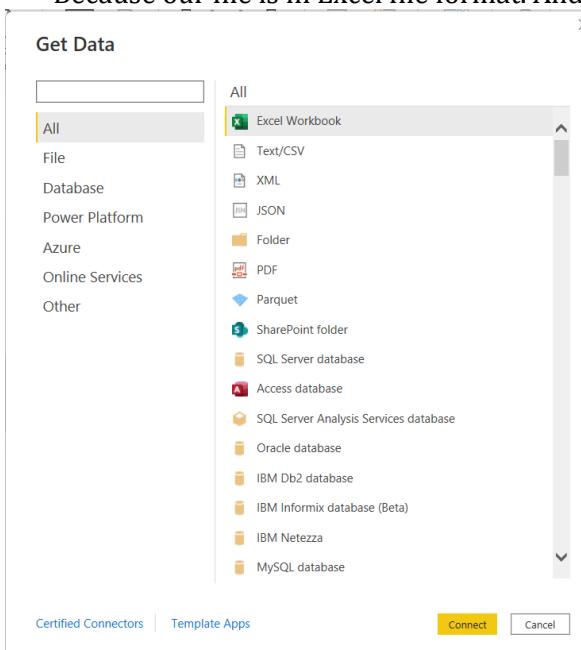
A Power BI dashboard is a one-page canvas that use visualizations to tell a story. Because the dashboard is limited to one page, a well-designed dashboard contains only the most important elements of that story. A dashboard connects different tables and columns to create a meaningful visualization.

Connecting Data

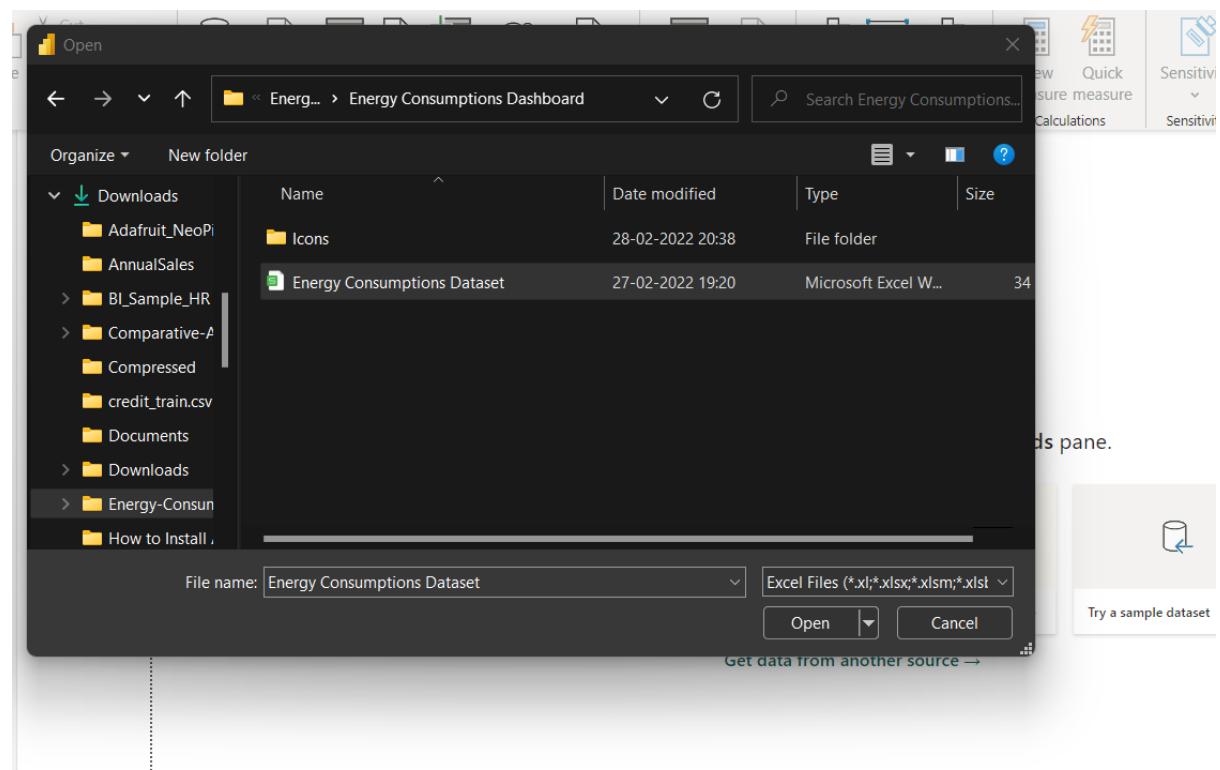
1. When you open the Power BI Desktop app you will see a window as below click Get Data option.



2. As this is an Excel file, select the **Excel Workbook** option from the drop-down list. Because our file is in Excel file format. And click connect.



3. Select the file named **Energy Consumption Dataset** file and click open.



4. After selecting the file and select tables in the file, data will be displayed in the below format.

The screenshot shows the Power BI Navigator pane. On the left, under 'Display Options', the 'Energy Consumptions Dataset.xlsx [3]' file is expanded, showing three tables: 'Building Master', 'Energy Consumptions', and 'Rates'. The 'Rates' table is currently selected. On the right, the 'Rates' table data is displayed in a grid format:

Year	Energy Type	Price Per Unit
2016	Water	0.05
2017	Water	0.055
2018	Water	0.0605
2019	Water	0.06655
2020	Water	0.073205
2016	Gas	1
2017	Gas	1.1
2018	Gas	1.21
2019	Gas	1.331
2020	Gas	1.4641
2016	Electricity	0.08
2017	Electricity	0.088
2018	Electricity	0.0968
2019	Electricity	0.10648
2020	Electricity	0.117128

5. Click on Transform Data.

Power Query

Power Query is a powerful tool used to connect to many different data sources and transform the data into the shape you want. It will help you to find out missing values, any data errors, any data type mismatch, any outliers etc.

- After clicking the Transform Data. The data will appear in the Power Query Editor.

The screenshot shows the Power Query Editor interface with the following details:

- File Bar:** Home, Transform, Add Column, View, Tools, Help.
- Queries List:** Building Master, Energy Consumptions, Rates.
- Current Query:** A table named "Building Master" with 5 columns: Date, Building, Water Consumption, Electricity Consumption, and Gas Consumption.
- Transform ribbon:** Data Type: Date, Use First Row as Headers, Append Queries, Text Analytics, Merge Queries, Combine Files, Azure Machine Learning, Combine, AI Insights.
- Properties Panel:** Name: Energy Consumptions, All Properties.
- Applied Steps Panel:** Source, Navigation, Promoted Headers, Changed Type.
- Data Preview:** Shows the first 1000 rows of the transformed data.
- Bottom Status:** 5 COLUMNS, 803 ROWS, Column profiling based on top 1000 rows, PREVIEW DOWNLOADED AT 09:53.

- Go to Building Master Table you will see the Column Heading as Column 1 like that.
- The Heading are present in 1st row so we need to make 1st as headings.
- Now select the 1st row go to home tab and click on the Use First Row as Headers as shown below.

The screenshot shows the Power Query Editor interface with the following details:

- File Bar:** Home, Transform, Add Column, View, Tools, Help.
- Queries List:** Building Master, Energy Consumptions, Rates.
- Current Query:** A table named "Building Master" with 3 columns: Column1, Column2, and Column3.
- Transform ribbon:** Data Type: Any, Use First Row as Headers, Use Headers as First Row.
- Data Preview:** Shows the first 1000 rows of the building master data.

10. Now you can see the proper heading as shown below.

	Building	City	Country
1	B1000	New York	USA
2	B1001	New York	USA
3	B1002	New York	USA
4	B1003	Los Angeles	USA
5	B1004	Chicago	USA
6	B1005	Houston	USA
7	B1006	Phoenix	USA
8	B1007	Chicago	USA
9	B1008	Chicago	USA
10	B1009	Los Angeles	USA
11	B1010	Los Angeles	USA

11. Now go to Energy Consumption Table and select Water Consumption, Electricity Consumption and Gas Consumption.

12. Go to Transform tab and click on the unpivot column dropdown and click on Unpivot only selected columns as shown below.

Date	Building	Water Consumption	Electricity Consumption	Gas Consumption
01-01-2016	B1003	309176	25577	3581
01-01-2016	B1004	257742	33917	4709
01-01-2016	B1005	276221	35698	2810
01-01-2016	B1006	401399	35458	3660
01-01-2016	B1007	413543	29061	2149
01-01-2016	B1008	343048	30666	4075
01-01-2016	B1009	412804	23541	3263
01-01-2016	B1010	417348	33490	3067
01-02-2016	B1000	437812	41404	4822
01-02-2016	B1001	370356	50269	2872
01-02-2016	B1002	231200	38796	4414
01-02-2016	B1003	336263	30638	2861
01-02-2016	B1004	267027	47231	3846
01-02-2016	B1005	424629	21445	3802
01-02-2016	B1006	453536	43418	4704
01-02-2016	B1007	252241	49719	2499
01-02-2016	B1008	202733	32055	3200
01-02-2016	B1009	258350	33749	3946

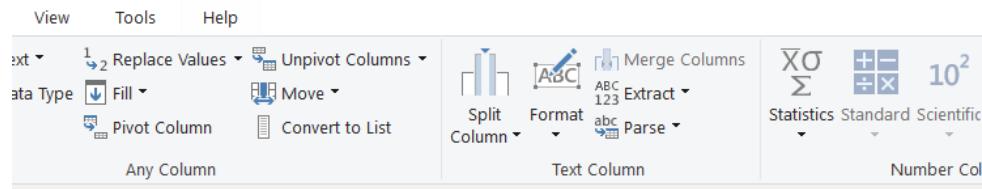
13. Now you will see two new columns Attribute and Value as shown below.

Date	Building	Attribute	Value
01-01-2016	B1000	Water Consumption	346159
01-01-2016	B1000	Electricity Consumption	38819
01-01-2016	B1000	Gas Consumption	3378
01-01-2016	B1001	Water Consumption	281717
01-01-2016	B1001	Electricity Consumption	46252
01-01-2016	B1001	Gas Consumption	2187
01-01-2016	B1002	Water Consumption	259530
01-01-2016	B1002	Electricity Consumption	41091
01-01-2016	B1002	Gas Consumption	3173
01-01-2016	B1003	Water Consumption	309176
01-01-2016	B1003	Electricity Consumption	25577
01-01-2016	B1003	Gas Consumption	3581
01-01-2016	B1004	Water Consumption	257742
01-01-2016	B1004	Electricity Consumption	33917
01-01-2016	B1004	Gas Consumption	4709
01-01-2016	B1005	Water Consumption	276221

14. Now rename new columns as shown below.

15. And in the Consumption type we need to remove the consumption word from every row.

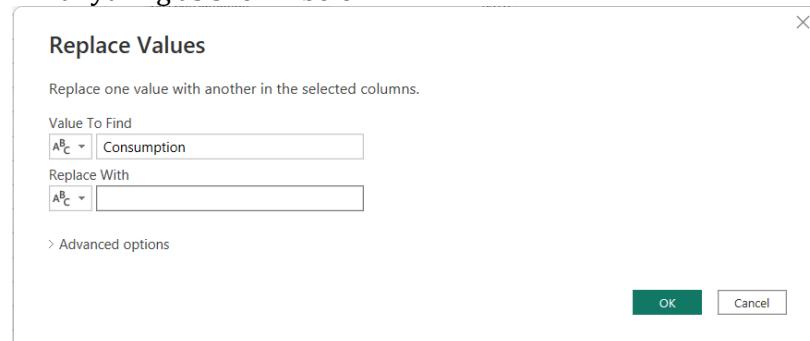
16. So select the Consumption type column and click on Replace values as shown below.



A screenshot of the Microsoft Power BI ribbon. The 'Data' tab is selected, showing various options like 'Unpivot Columns', 'Pivot Column', 'Format', 'Text Column', and 'Number Column'. Below the ribbon is a table preview window showing five rows of data with columns 'Building', 'Consumption Type', and 'Unit'.

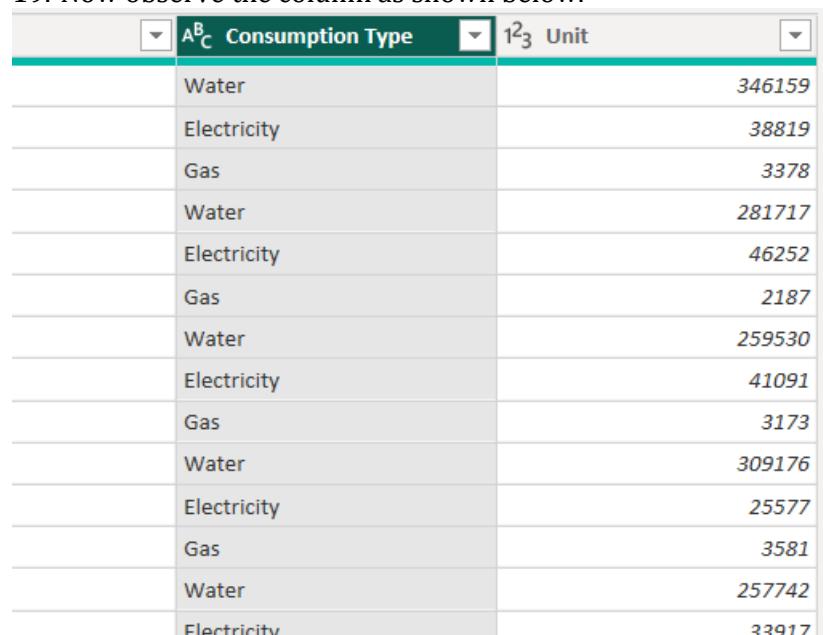
	Building	Consumption Type	Unit
01-01-2016	B1000	Water Consumption	346159
01-01-2016	B1000	Electricity Consumption	38819
01-01-2016	B1000	Gas Consumption	3378
01-01-2016	B1001	Water Consumption	281717
01-01-2016	B1001	Electricity Consumption	46252

17. A small window will appear give the condition. In the replace with section don't type anything as shown below.



18. Click Ok.

19. Now observe the column as shown below.

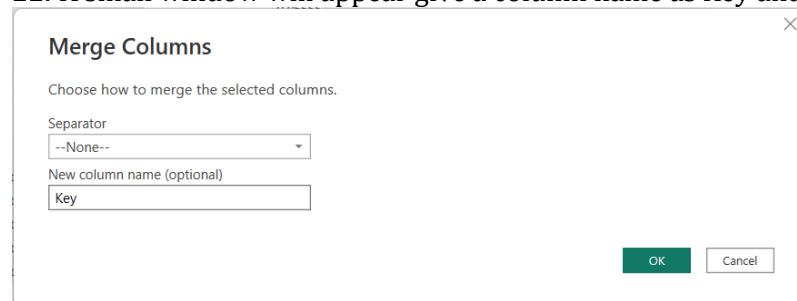


A screenshot of a table showing the results of the replacement. The 'Consumption Type' column now lists 'Water', 'Electricity', 'Gas', etc., instead of 'Water Consumption', 'Electricity Consumption', etc.

	Consumption Type	Unit
	Water	346159
	Electricity	38819
	Gas	3378
	Water	281717
	Electricity	46252
	Gas	2187
	Water	259530
	Electricity	41091
	Gas	3173
	Water	309176
	Electricity	25577
	Gas	3581
	Water	257742
	Electricity	33917

20. Now go to Rates Table and Select Year and Energy type as shown below.
 21. Go to Add column and click on the merge column as shown below.

22. A small window will appear give a column name as Key and Click Ok.



23. Now a new column has been added to the table as shown below.

	A ^b _c Energy Type	1.2 Price Per Unit	A ^b _c Key
6	Water	0.05	2016Water
7	Water	0.055	2017Water
8	Water	0.0605	2018Water
9	Water	0.06655	2019Water
0	Water	0.073205	2020Water
6	Gas	1	2016Gas
7	Gas	1.1	2017Gas
8	Gas	1.21	2018Gas
9	Gas	1.331	2019Gas
0	Gas	1.4641	2020Gas
6	Electricity	0.08	2016Electricity
7	Electricity	0.088	2017Electricity
8	Electricity	0.0968	2018Electricity
9	Electricity	0.10648	2019Electricity
0	Electricity	0.117128	2020Electricity

24. Now go to Energy Consumption table select Date column and go to Add column tab click on the Date dropdown, select the Year and click on the Year option as shown below.

25. A new Year column has been added to the table as shown below.

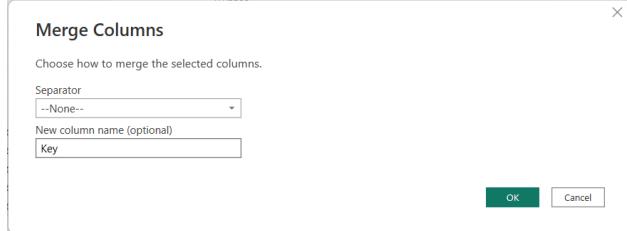
Σ	Unit	Σ	Year
	346159		2016
	38819		2016
	3378		2016
	281717		2016
	46252		2016
	2187		2016
	259530		2016
	41091		2016
	3173		2016
	309176		2016
	25577		2016
	3581		2016
	257742		2016
	33917		2016
	4709		2016

26. Select Year and Consumption type as shown below.

27. Go to Add column and click on the merge column.

Building	Consumption Type	Unit	Year
B1000	Water	346159	2016
B1000	Electricity	38819	2016
B1000	Gas	3378	2016
B1001	Water	281717	2016
B1001	Electricity	46252	2016
B1001	Gas	2187	2016
B1002	Water	259530	2016

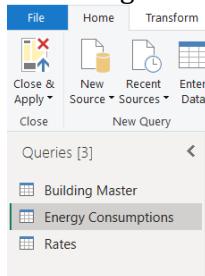
28. A small window will appear give a column name as Key and Click Ok.



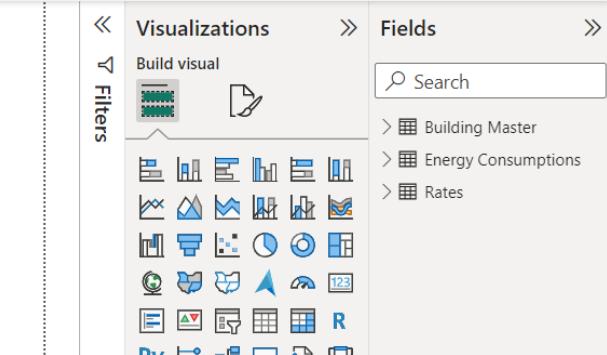
29. Now a new column has been added to the table as shown below.

Σ	Key
2016	2016Water
2016	2016Electricity
2016	2016Gas
2016	2016Water
2016	2016Electricity
2016	2016Gas
2016	2016Water
2016	2016Electricity
2016	2016Gas
2016	2016Water
2016	2016Electricity
2016	2016Gas
2016	2016Water
2016	2016Electricity
2016	2016Gas

30. Now go to Home tab and click on the Close and Apply.

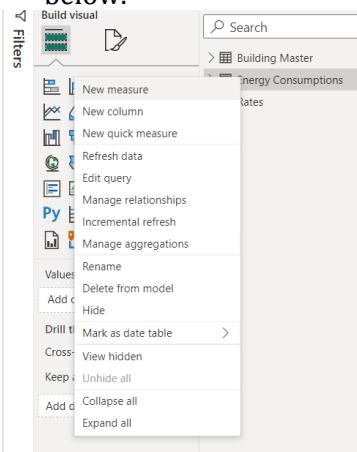


31. Now the data load into the Power BI Desktop in the field section.



Create Measures

32. Right click on the Energy consumption table and click on the New Measure as shown below.



33. Type a Dax for Total Cost.

Dax: Total Cost =

```
SUMX (
    'Energy Consumptions',
    'Energy Consumptions'[Unit] * RELATED ( Rates[Price Per Unit] )
)
```

A screenshot of the Power BI Measure editor. It shows a 'Measure' table with one row. The 'Structure' column contains the DAX code: 'Total Cost = SUMX ('Energy Consumptions', 'Energy Consumptions'[Unit] * RELATED (Rates[Price Per Unit]))'. The 'Formatting' and 'Properties' tabs are visible at the top.

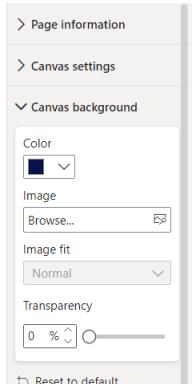
34. Type a Dax for Unit Consumed.

Dax: Unit Consumed = SUM('Energy Consumptions'[Unit])

A screenshot of the Power BI Measure editor. It shows a 'Measure' table with one row. The 'Structure' column contains the DAX code: 'Unit Consumed = SUM('Energy Consumptions'[Unit])'. The 'Formatting' and 'Properties' tabs are visible at the top.

Background

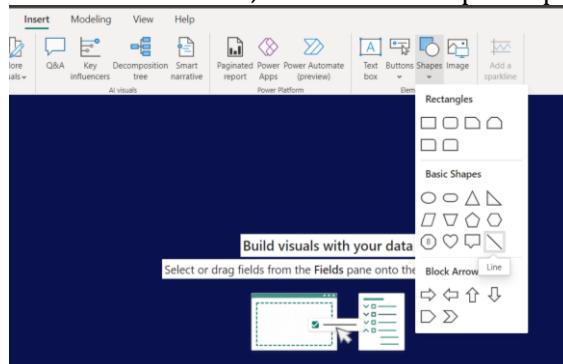
35. Go to format page and select dropdown canvas background.
36. Set the following format as shown below.



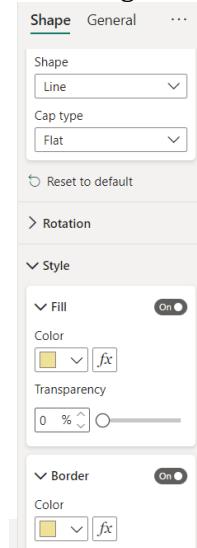
37. Now our background looks like this.



38. Go to Insert tab, Click on the Shape dropdown and click on the Line as shown below.



39. Change the following format for the line as shown below.



40. After changing the format adjust the Line as shown below.

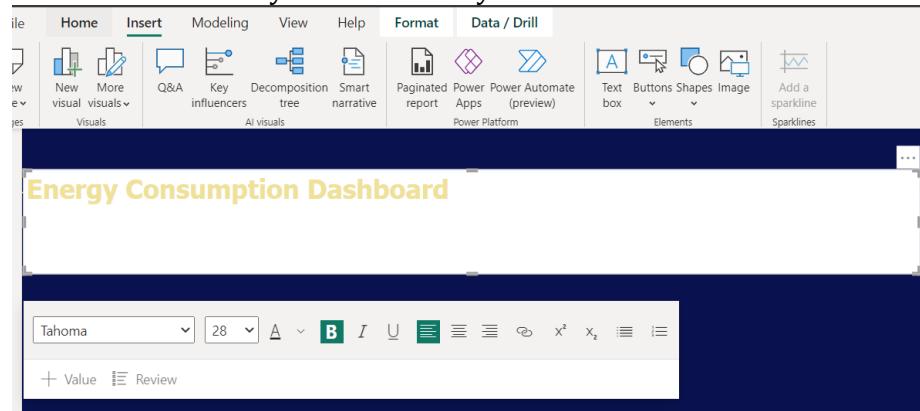


Heading

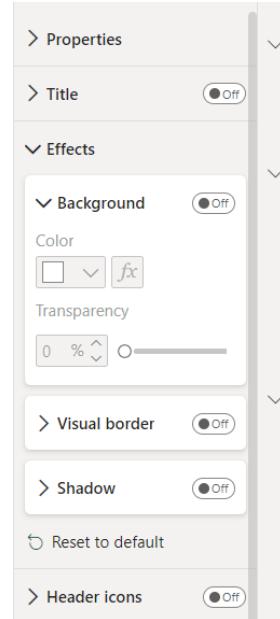
41. Now we give a heading to our dashboard.

42. Go to Insert tab select Text box option it will appear as below and Type the Heading as shown below.

43. You can write any format with any color.



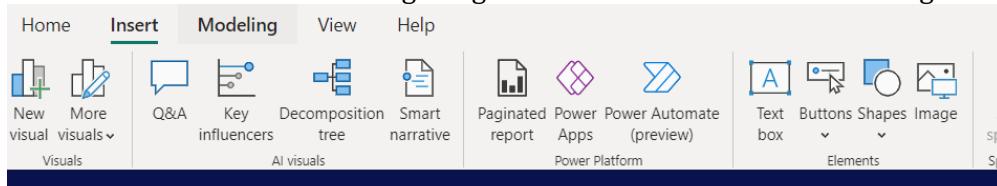
44. Follow the below visual format for the Heading as shown below.



45. Adjust the heading as shown below.

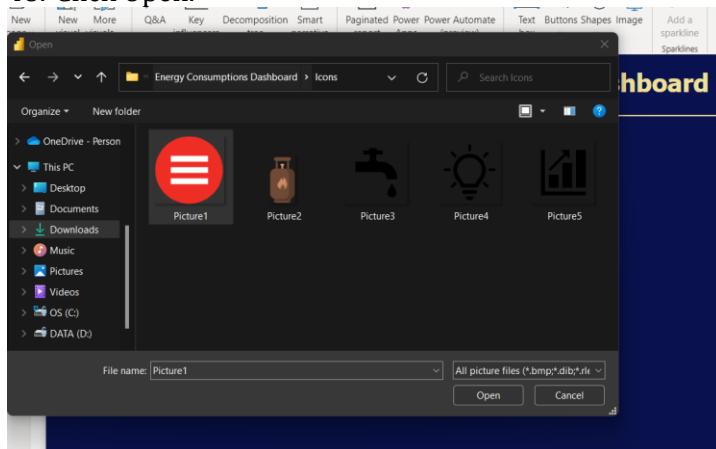


46. Now we need to add an Image so go to Insert tab and click on the Image.

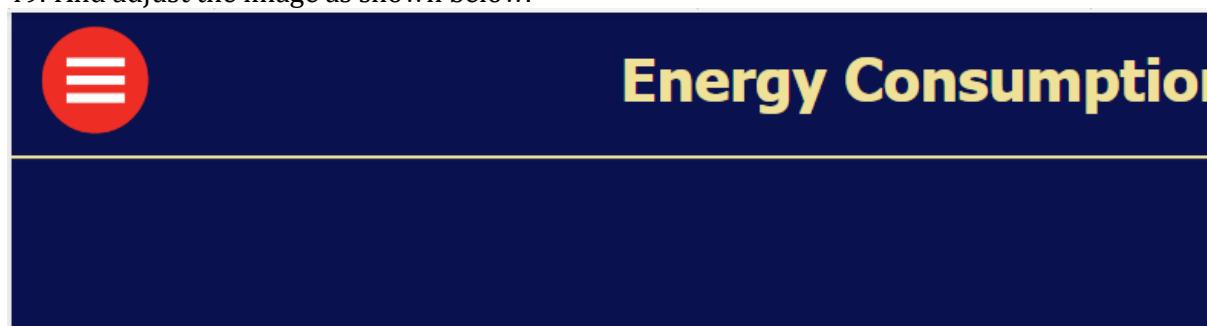


47. And select the Image from the device as shown below.

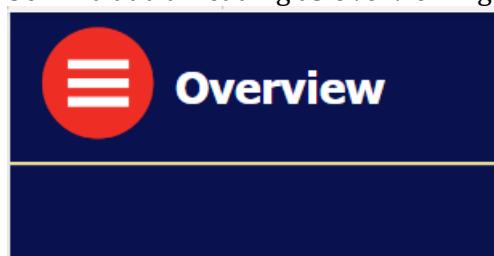
48. Click Open.



49. And adjust the image as shown below.



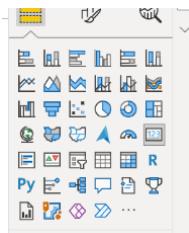
50. And add a Heading as Overview right side of the Image as shown below.



Creating Cards

A card is useful to display a single number (or metric value). For example, If we want to track the total orders, total sales value, or total quotations we sent, then we can use this Card visualization.

51. In order to create one, first, click on the Card present in the Visualization section. It will create a Card with dummy data.



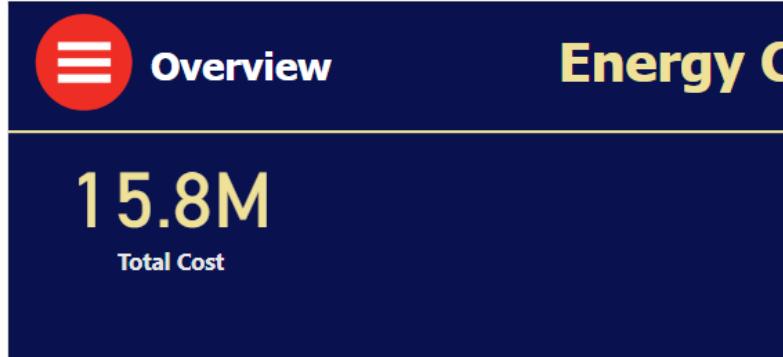
52. Let me drag the Total Cost into the Fields section as shown below.

A screenshot of a card visualization. The main area displays the value '15.8M'. Below it, the text 'Total Cost' is visible. To the right, the 'Fields' pane is open, showing 'Total Cost' listed under the 'Fields' section. Other options like 'Drill through', 'Cross-report', and 'Keep all filters' are also visible.

53. Change the following format for the card as shown below.

A screenshot of the 'Visual' settings pane for a card. On the left, under 'Callout value', the font is set to 'DIN' at size 45, bolded. Under 'Category label', the font is set to 'Segoe UI...' at size 12, bolded. On the right, under 'General', the title is turned off. Under 'Effects', the background is turned off, and the transparency is set to 0%. There are also options for 'Visual border', 'Shadow', and 'Header icons'.

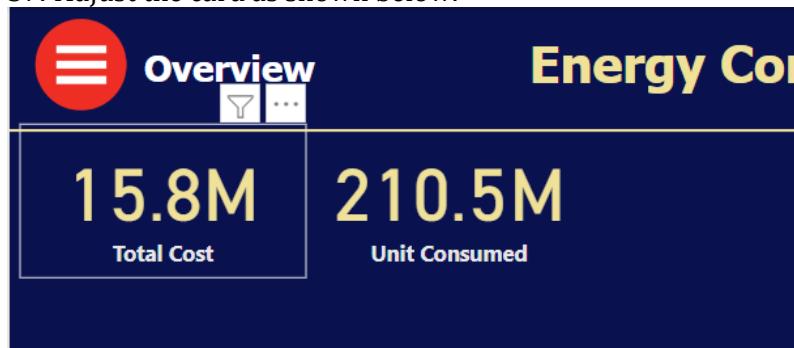
54. After changing the format adjust the card as shown below.



55. Now create another with same format.

56. For the second card use Unit Consumed field.

57. Adjust the card as shown below.

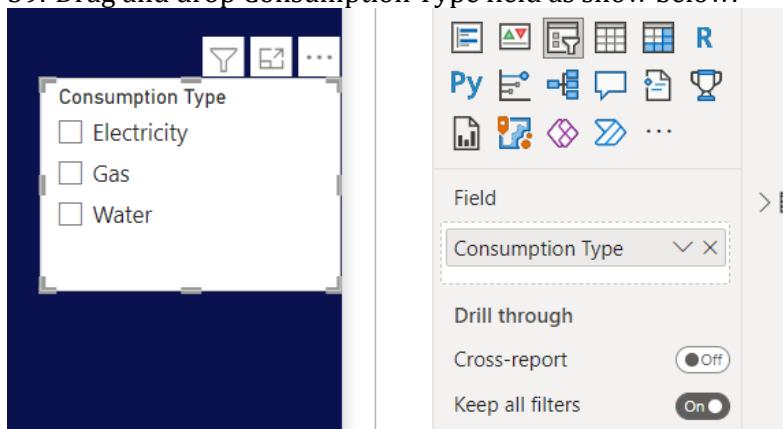


Slicer

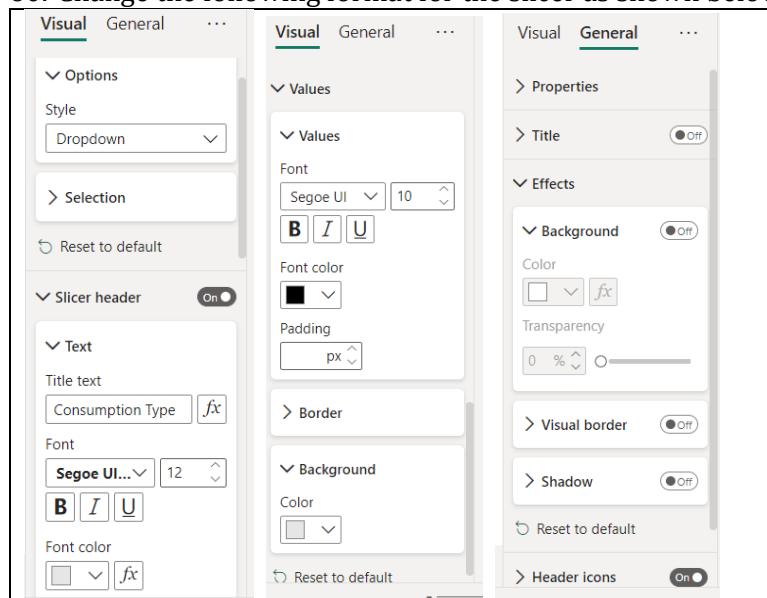
Power BI Slicer is commonly used to add filters to the canvas or to display filters on the report canvas.

58. In order to create one, first, click on the Slicer present in the Visualization section. It will create a Slicer with dummy data.

59. Drag and drop Consumption Type field as show below.



60. Change the following format for the slicer as shown below.



61. After changing the format adjust the slicer as shown below.



62. Create another three slicers with the same format.

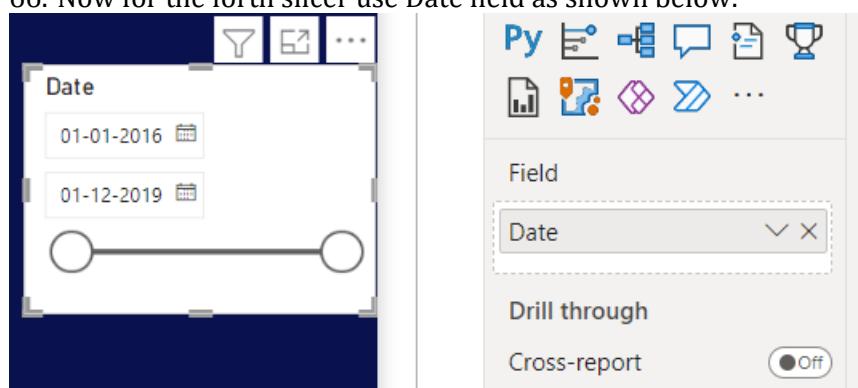
63. For second slicer use City field.

64. For Third slicer use Building field.

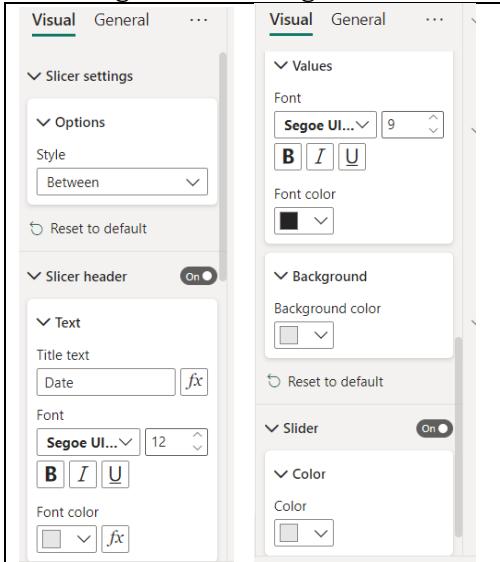
65. After creating slicers and changing the format adjust slicers as shown below.



66. Now for the forth slicer use Date field as shown below.



67. Change the following format for the Date slicer as shown below.



68. Adjust the slicer as shown below.

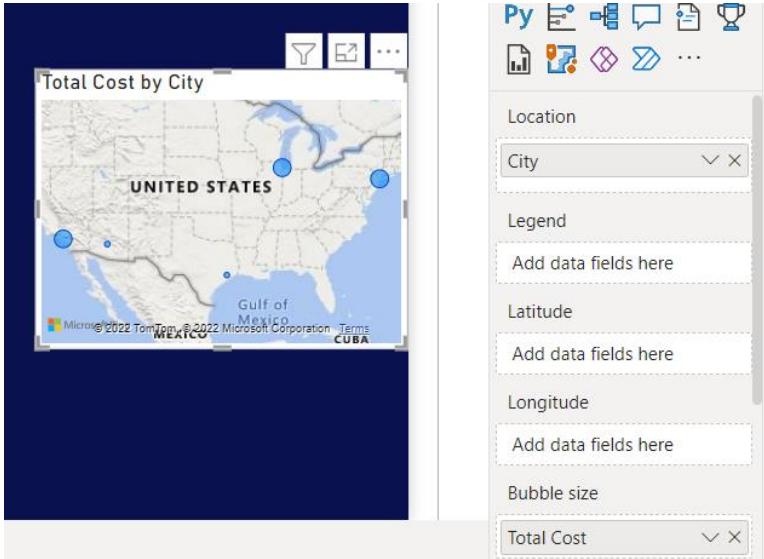


Map

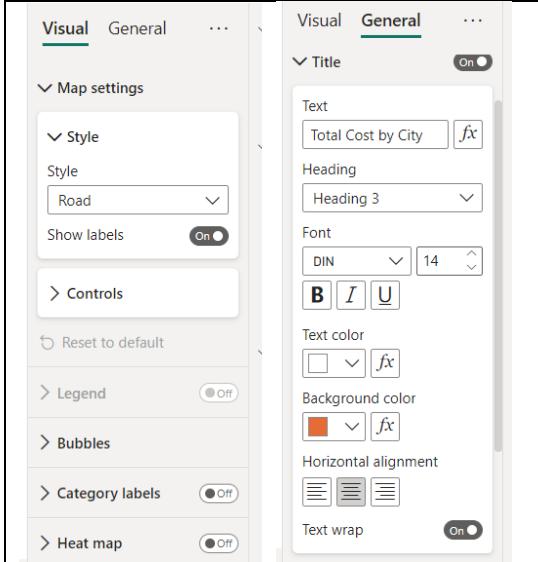
Power BI Maps help you to visualize the geological data.

69. In order to create one, first, click on the Map present in the Visualization section. It will create a Map with dummy data.

70. Drag and drop City field in Location section and Total Cost field in Bubble Size section as shown below.



71. Change the following format for the Map as shown below.



72. After changing the format adjust the Map as shown below.

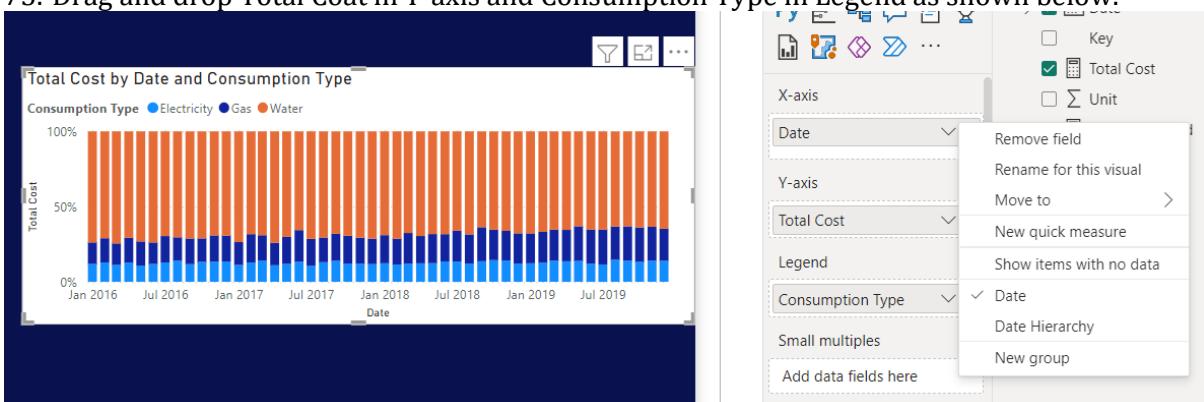


100% Stacked Column Chart

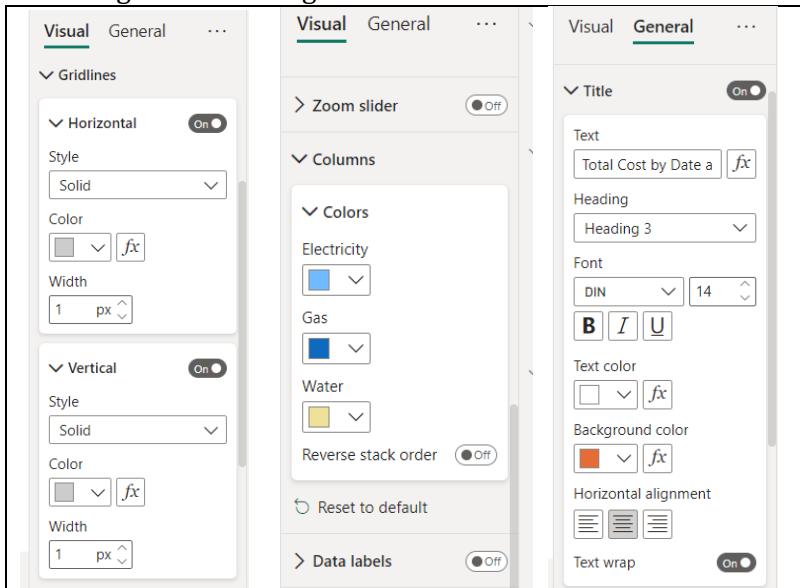
73. In order to create one, first, click on the 100% Stacked Column Chart present in the Visualization section. It will create a 100% Stacked Column Chart with dummy data.

74. Drag and drop Date in X-axis. Click on the Date drop down and select Date as shown below.

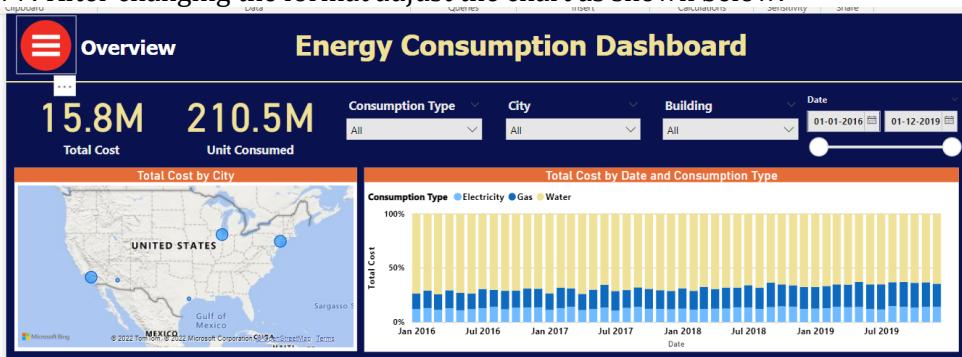
75. Drag and drop Total Coat in Y-axis and Consumption Type in Legend as shown below.



76. Change the following format for the chart as shown below.



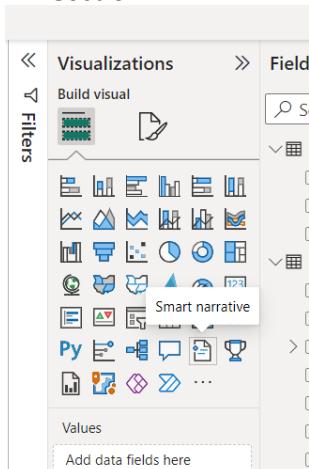
77. After changing the format adjust the chart as shown below.



Smart Narrative

The smart narrative visualization helps you quickly summarize visuals and reports. It provides relevant innovative insights that you can customize.

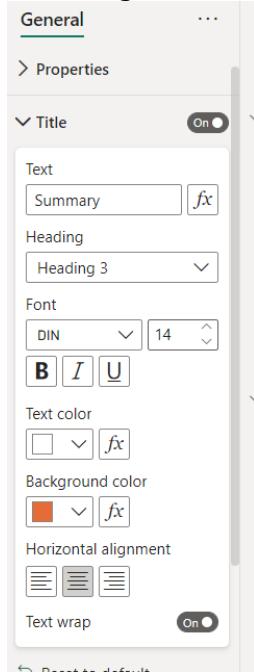
78. In order to create one, first, click on the Smart Narrative present in the Visualization section.



79. It will automatically summarize visuals as shown below.

Total Cost for Gas started trending up on Friday, March 1, 2019, rising by 2.61% (2,197.5) in 8 months.
At 43,35,044.4, New York had the highest Total Cost and was 200.85% higher than Houston, which had the lowest Total Cost at 14,40,927.7.
Across all 5 City, Total Cost ranged from 14,40,927.7 to 43,35,044.4.

80. Change the following format.



81. Adjust the visual as shown below.

Overview Energy Consumption

15.8M **210.5M**

Total Cost Unit Consumed

Consumption Type: All City: All

Total Cost by City

UNITED STATES MEXICO

Gulf of Mexico

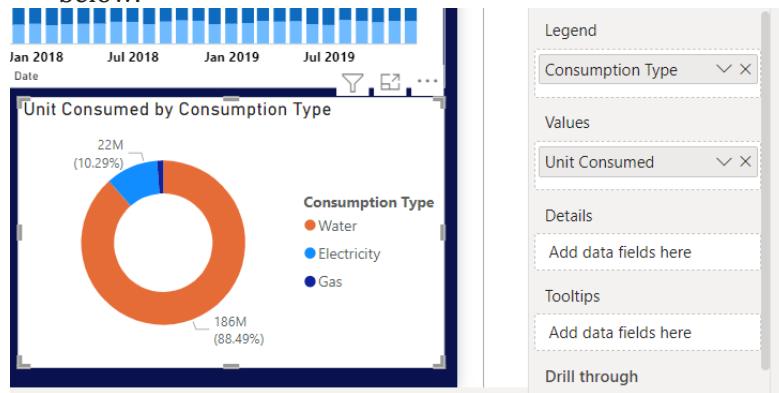
Summary

Total Cost for Gas started trending up on Friday, March 1, 2019, rising by 2.61% (2,197.5) in 8 months.
At 43,35,044.4, New York had the highest Total Cost and was 200.85% higher than Houston, which had the lowest Total Cost at 14,40,927.7.
Across all 5 City, Total Cost ranged from 14,40,927.7 to 43,35,044.4.

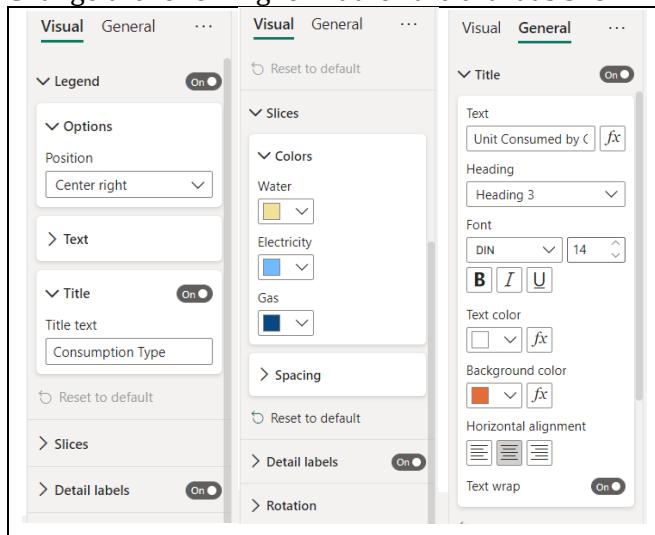
Donut Chart

Power BI Donut Chart is similar to Pie, which is useful to visualize the higher-level data.

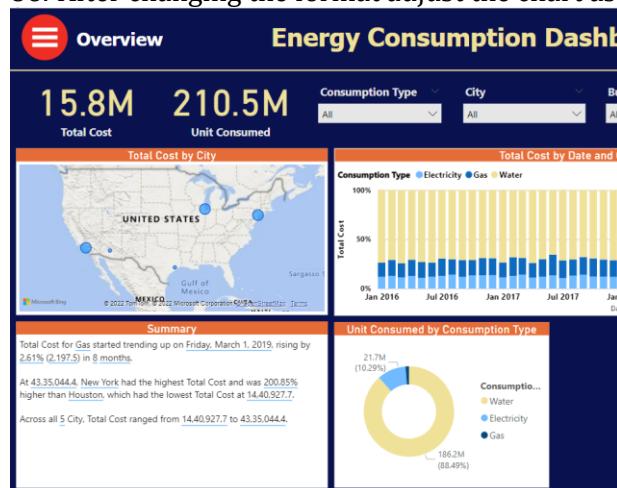
82. When you click on this under the Visualization section, it automatically creates a Donut Chart with dummy data.
83. Drag and Drop the Consumption Type from Fields section to Legend field.
84. And Drag and Drop the Unit Consumed from Fields section to Values field as shown below.



85. Change the following format for the chart as shown below.



86. After changing the format adjust the chart as shown below.

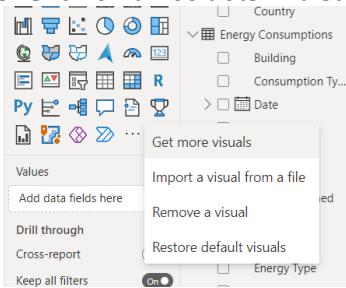


Infographic Designer

The infographic designer custom visual lets you control the specific appearance of lists, bar charts, and column charts with precise control of shapes, color, and layout so that you can represent information in a way that best tells the story of your data.

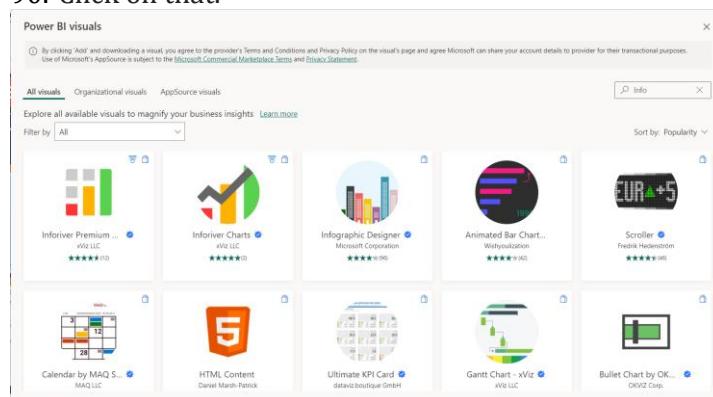
87. Right now we don't have this visual so we are going to get this visual.

88. Click on three dots in visualization and click on Get more visuals as shown below.



89. In the search box type Info, you will see a Infographic Designer as shown below.

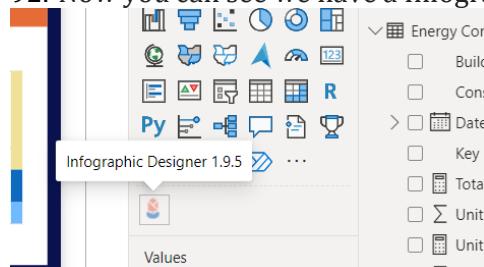
90. Click on that.



91. Now click on Add. It will add in to the visualization.



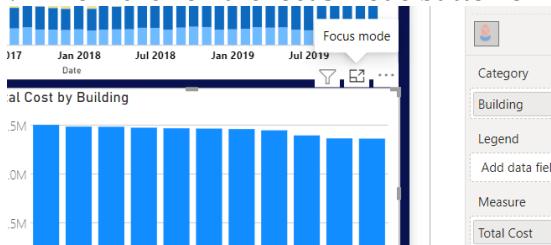
92. Now you can see we have a Infographic Designer visual.



93. Click on the visual drag and drop Building in category section and Total Cost in Measure section as shown below.

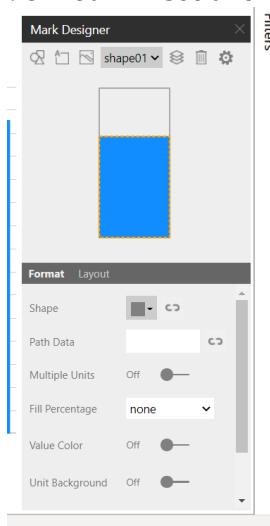


94. Now click on the focus mode button on the chart.

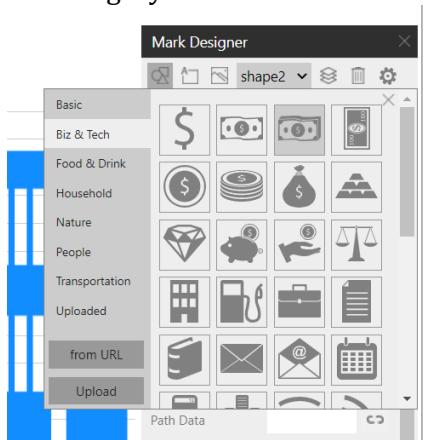


95. The chart will visible in the whole page and click on the edit as pencil symbol on the chart.

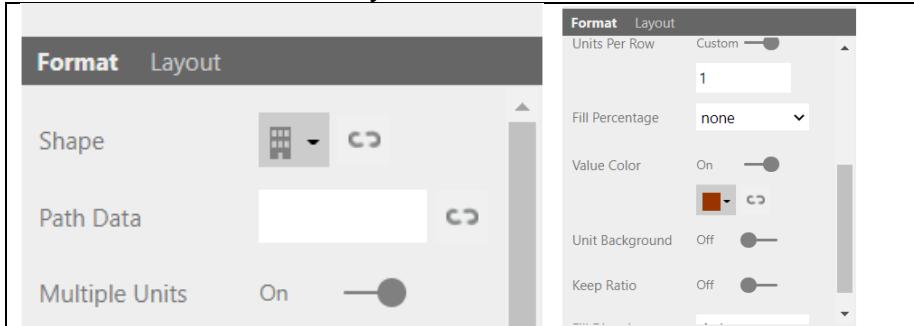
96. You will see a following options and click on the delete button as shown below.



97. Now click on the Insert shape button on the Left corner and select the Biz and Tech category and click on the building shape as shown below.

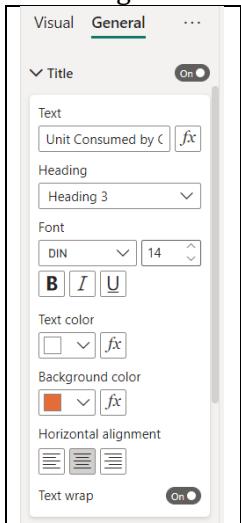


98. Now Follow the format layout for the chart.

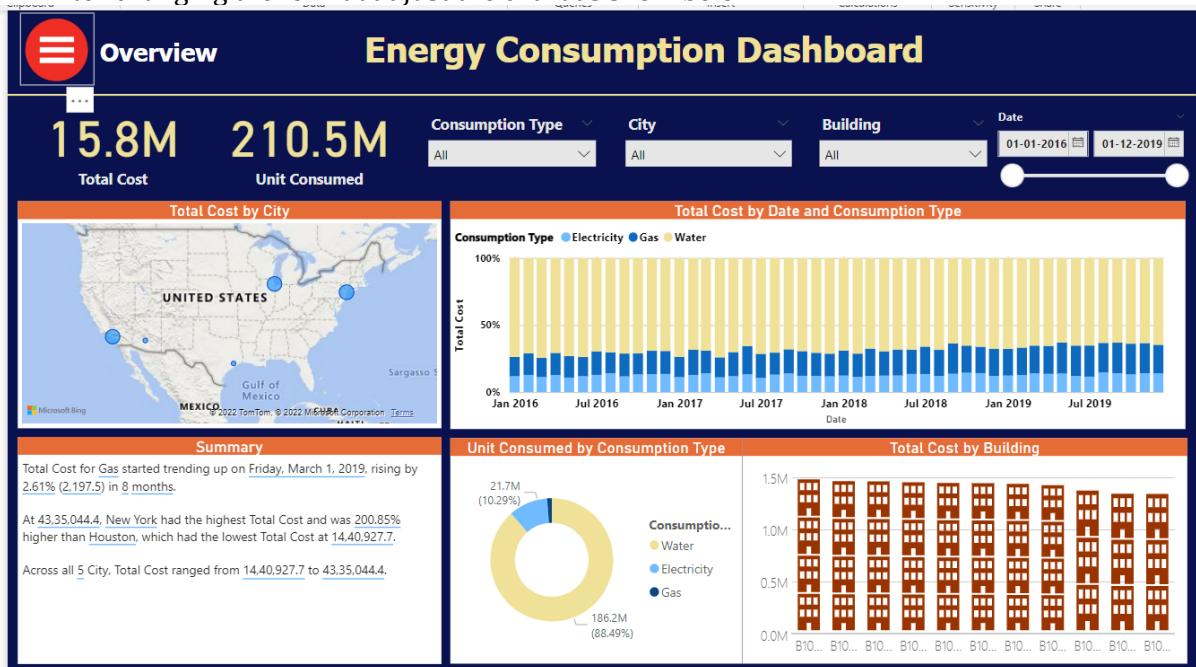


99. Now click on Back to report.

1. Change the following format for the chart as shown below.

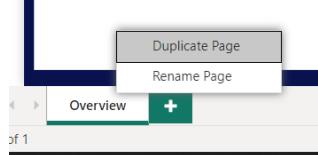


2. After changing the format adjust the chart as show below.



Page 2

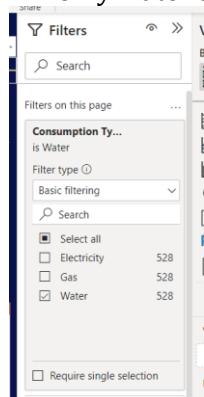
1. Now we are going to create a report page water.
2. Name the 1st page as Overview and right click on the click on Duplicate page.



3. Rename the Duplicate page as water. In the duplicate page change the Overview heading to Water and remove Consumption type slicer.
4. Adjust the remaining fields as shown below.

A screenshot of a Power BI dashboard titled 'Energy Consumption Dashboard'. The main title 'Water' is displayed in a red circle. Below it are two large numerical values: '15.8M' and '210.5M'. To the right are three dropdown filters: 'City' (All), 'Building' (All), and 'Date' (01-01-2016 to 01-12-2019). At the bottom is a chart area with a title 'Total Cost by Date and Consumption Type'.

5. Go to filters in that Filter on this page drag and drop Consumption type field and select only water as shown below.

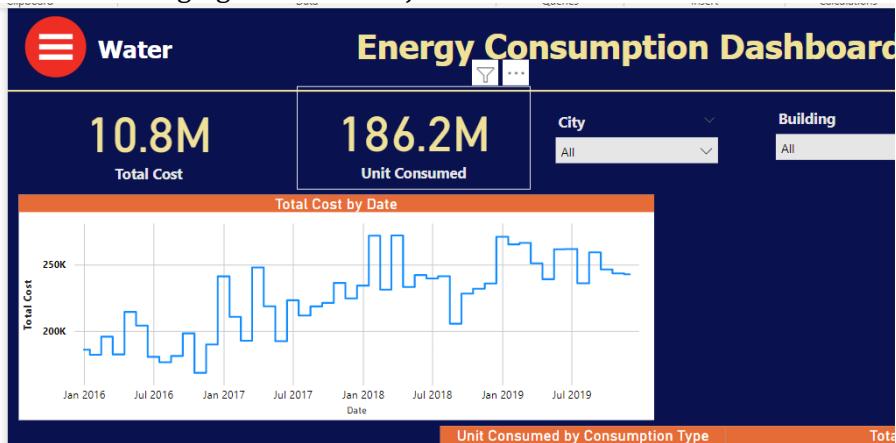


6. Remove Map and Smart Narrative visuals.
7. Select 100% Stacked column chart, go to visualization and click on Line chart it will automatically changes to line chart as shown below.

A screenshot of the same dashboard as before, but now featuring a line chart instead of a stacked column chart. The chart is titled 'Consumption Type Water' and shows 'Total Cost' over time from January 2016 to July 2019. The chart has a Y-axis labeled 'Total Cost' ranging from 0.2M to 0.3M and an X-axis labeled 'Date' with markers for Jan, Jul, and Jan of each year. The chart area is located on the left side of the dashboard, with other filters and a visualization pane on the right.

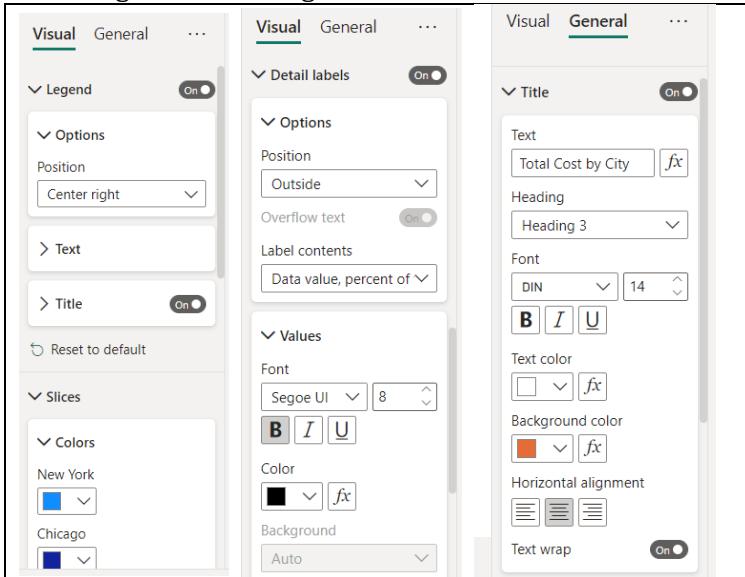
8. Now change the following format for the Line chart as shown below.

9. After changing the format adjust the chart as shown below.

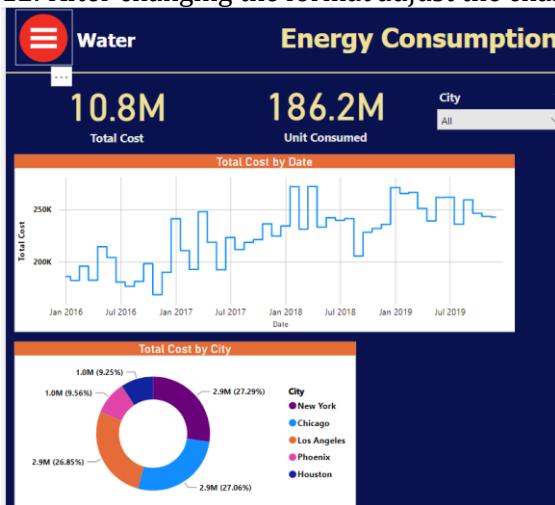


10. Now select the donut and give the following fields as shown below.

11. Change the following format for the donut chart as shown below.



12. After changing the format adjust the chart as shown below.



13. Expand the Infographic Designer as shown below.



14. Now click on the Table from the visualization.

15. Drag and drop the following field as shown below.

The screenshot shows a Power BI report interface. On the left is a table titled "Total Cost by Building" with columns: Year, Quarter, Month, Day, City, Building, Unit Consumed, and Total Cost. The table contains data for Q1 2016 across various cities and buildings. To the right of the table is a treemap visualization where each building is represented as a brown rectangle of varying sizes, corresponding to its total cost. A legend below the treemap lists the buildings: B1000, B1003, B1005, B1010, B1004, B1002, B1009, and B1007. The Power BI ribbon and column selection pane are visible on the right.

16. Change the following format for the Table as shown below.

The screenshot displays three separate "Visual" settings panes side-by-side, all applied to the same table visualization. Each pane has a "General" tab selected. The first pane shows settings for "Style presets" (Minimal), "Grid" (Horizontal gridlines on), "Color" (Color palette), and "Border". The second pane shows "Values" settings for "Font" (Segoe UI, size 9), "Text color" (black), "Background color" (white), "Alternate text color" (black), "Alternate background color" (white), and "Text wrap" (on). The third pane shows "Column headers" settings for "Text" (Font: Segoe UI, size 10), "Text color" (white), "Background color" (orange-red), "Header alignment" (center), and "Text wrap" (on).

17. After changing the format adjust the table as shown below.

The screenshot shows a complex dashboard titled "Energy Consumption Dashboard" for water. At the top, there are two large numerical displays: "10.8M" under "Total Cost" and "186.2M" under "Unit Consumed". Below these are two dropdown filters: "City" set to "All" and "Building" set to "All". Further down are two date filters: "Date" with a range from "01-01-2016" to "01-12-2019" and a slider, and "Year, Quarter, Month" dropdowns. The main area of the dashboard features several visualizations: a line chart titled "Total Cost by Date" showing monthly consumption over time; a table titled "Total Cost by Building" listing data for buildings B1004 through B1007; a donut chart titled "Total Cost by City" showing the distribution of cost among New York, Chicago, Los Angeles, Phoenix, and Houston; and a treemap visualization titled "Total Cost by Building" showing the relative size of buildings B1008 through B1007. The dashboard has a red header bar and a blue footer bar.

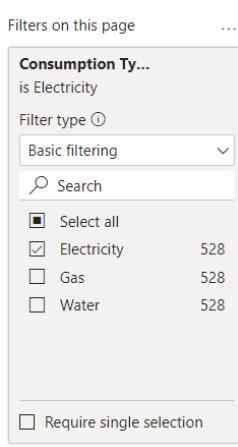
18. Our Water Report page is completed

Page 3

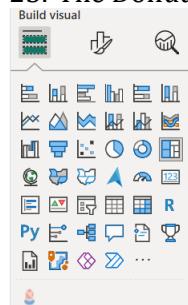
19. Duplicate the water page and rename it as Electricity.
20. Change the heading water to Electricity.



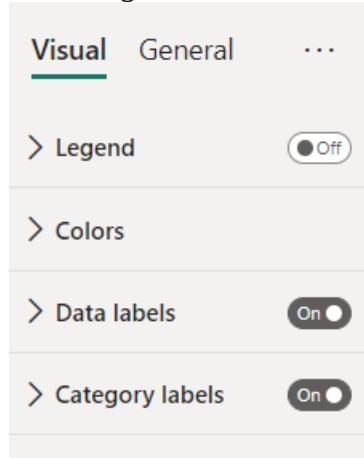
21. In the filter page select only Electricity as shown below.



22. Select the Donut chart and click on the Treemap in the visualization.
23. The Donut chart will change into Treemap.



24. Change the format for treemap as shown below.



25. After changing the format adjust the treemap as shown below.



26. Our Electricity Report page is completed.

Page 4

1. Duplicate the Electricity page and rename it as Gas.
2. Change the heading Electricity to Gas.



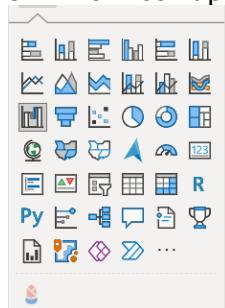
3. In the filter page select only Gas as shown below.

This screenshot shows the 'Filters on this page' sidebar. It includes a title 'Consumption Ty...' and a dropdown menu 'is Gas'. Below this, there is a 'Filter type' dropdown set to 'Basic filtering' and a search bar. A list of categories is shown with checkboxes:

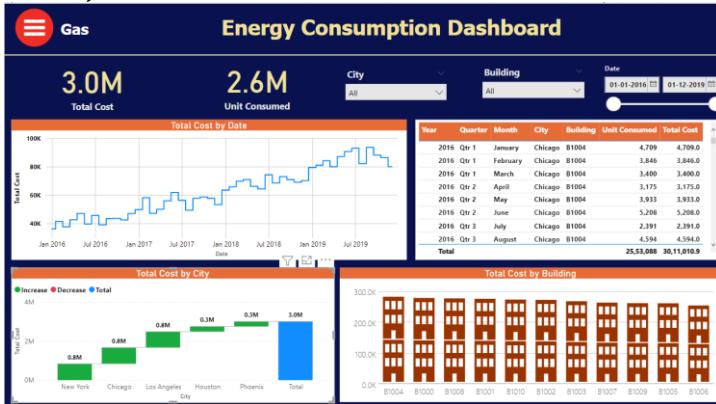
- Select all
- Electricity 528
- Gas 528
- Water 528

A checkbox for 'Require single selection' is also present at the bottom.

4. Select the Treemap and click on the Waterfall chart in the visualization.
5. The Treemap will change into Waterfall chart.



6. Adjust the Chart as shown below.



7. Our Gas Report page is completed.

Page Navigator

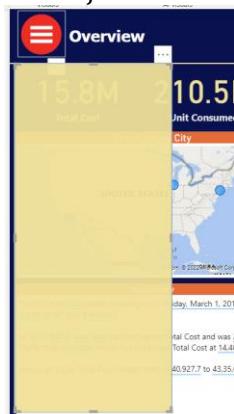
1. First get a rectangle shape from the shapes.

The screenshot shows the Power BI ribbon with the 'Insert' tab selected. A large blue rectangle is placed on the canvas, representing the visual element being created.

2. Give the below format.

The screenshot shows the 'Shape' Format pane with the 'Fill' section open, showing a yellow color swatch and a transparency value of 5%.

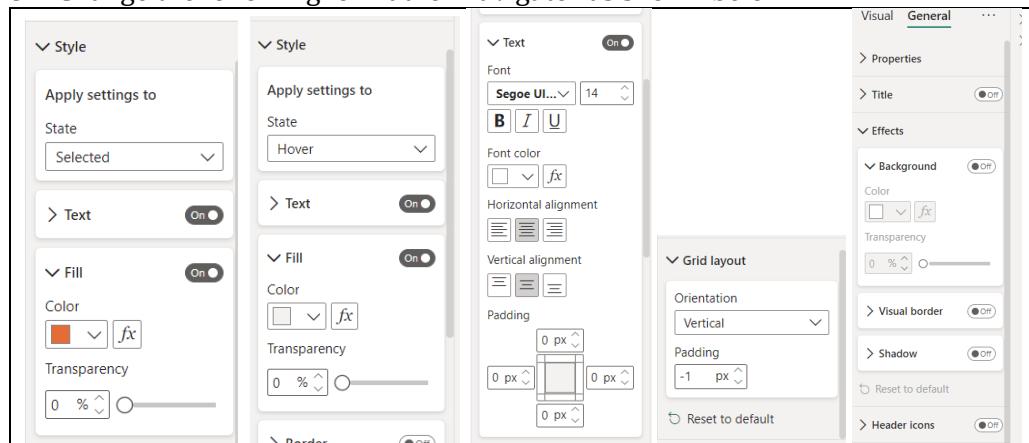
3. Adjust the rectangle as shown below.



4. Now go to Insert tab click on the Buttons drop down, click on Navigator and click on the page navigator as shown below.



5. Change the following format for navigator as shown below.



6. After changing the format adjust the Navigator as shown below.

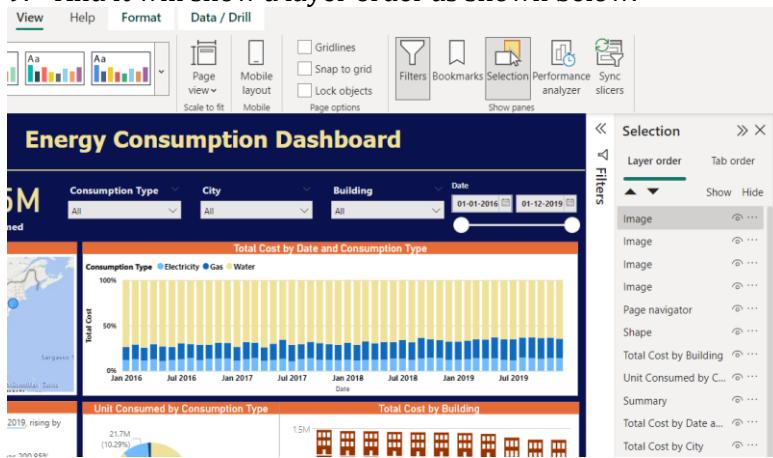


7. Add some images as shown below.

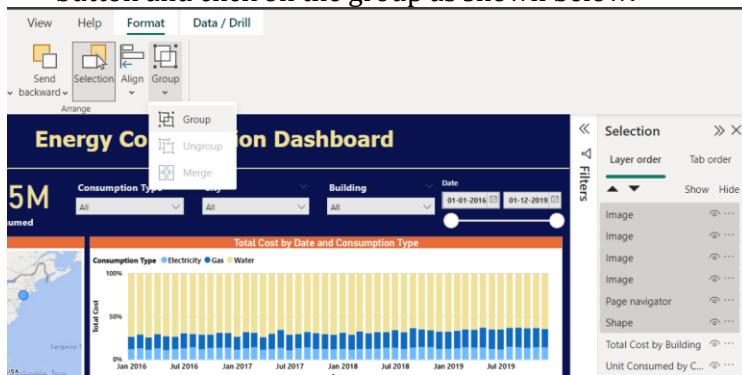


Selection

8. Go to View tab and click on the selection.
9. And it will show a layer order as shown below.



10. Now select the following layers and click on the format, click on the Group dropdown button and click on the group as shown below.

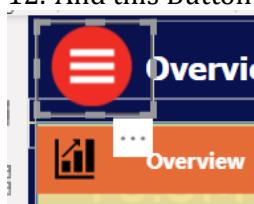


Bookmarks

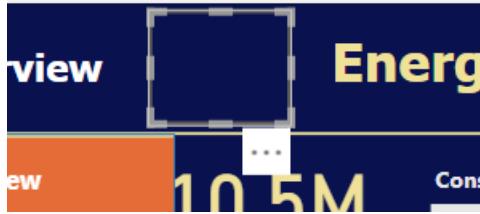
11. Go to Insert tab click on the buttons drop down and click on the Blank as shown below.



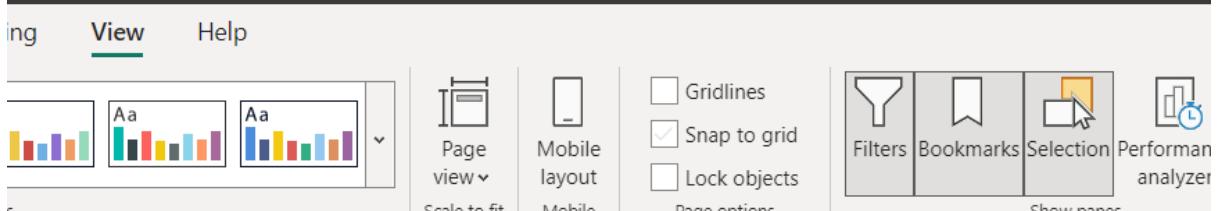
12. And this Button is our Button 1. Adjust that as shown below.



13. Get another button and this is our Button 2. Adjust that as shown below.

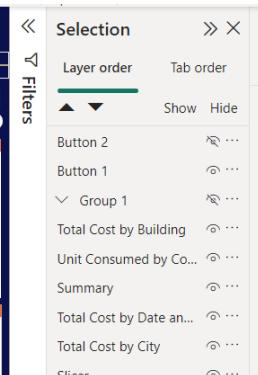
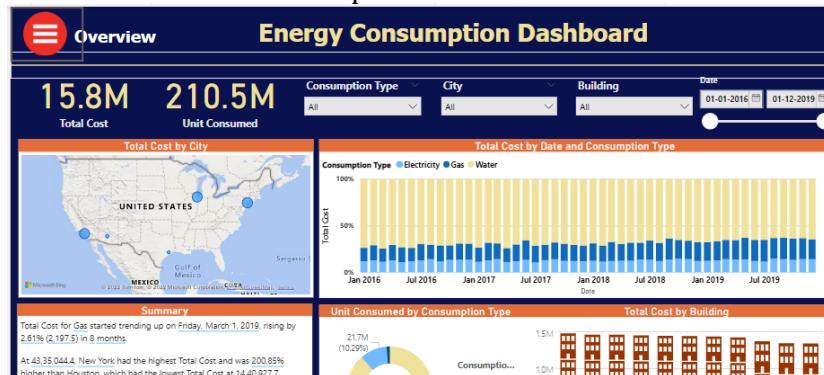


14. In the view tab click on the Bookmarks as shown below.

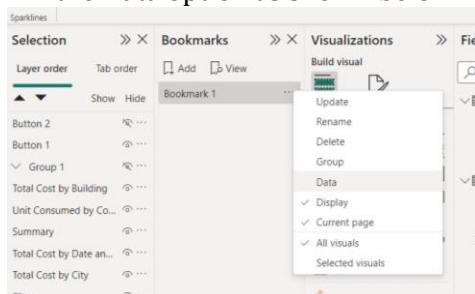


15. In the Selection you will see our Buttons 1 and 2. I renamed those buttons so we don't get confused.

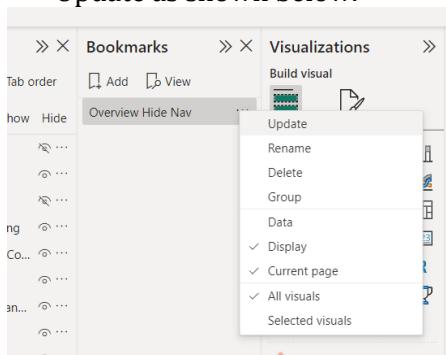
16. Hide Button 2 and Group 1 as shown below.



17. In the Bookmarks click on Add and in Bookmarks 1 click on the three dots and uncheck the Data option as shown below.



18. Rename the Bookmark as Overview Hide Nav and click on three dots and click on Update as shown below.



19. Now Unhide Button 2 and Group 1. Hide Button 1 as shown below.

The screenshot shows the 'Energy Consumption Dashboard' with various filters at the top: Consumption Type (All), City (All), Building (All), and Date (01-01-2016 to 01-12-2019). Below the filters are three main visualizations: a map of the United States with data points for Water, Electricity, and Gas; a stacked bar chart titled 'Total Cost by Date and Consumption Type' showing consumption over time for Electricity, Gas, and Water; and two horizontal bar charts for 'Unit Consumed by Consumption Type' and 'Total Cost by Building'. To the right, the 'Selection' panel lists items with their layer and tab orders: Button 2 (Layer 2, Tab 2), Button 1 (Layer 1, Tab 1), Group 1 (Layer 1, Tab 1), Total Cost by Building (Layer 1, Tab 1), Unit Consumed by Co... (Layer 1, Tab 1), Summary (Layer 1, Tab 1), and Total Cost by Date an... (Layer 1, Tab 1). The 'Filters' panel on the far right shows the same list with 'Show' and 'Hide' buttons next to each item.

20. Now add another Bookmark do the same process.

21. Uncheck the Data, Rename the Bookmark and Update the Bookmark.

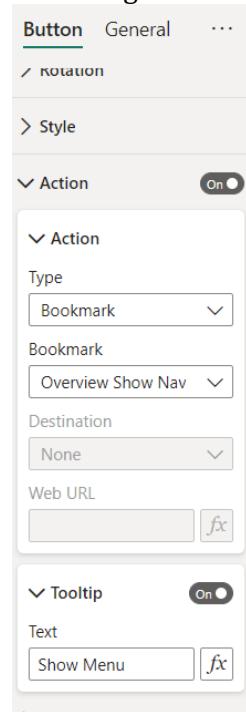
The 'Selection' panel shows the 'Bookmarks' section with 'Add' and 'View' buttons. It lists several items: Overview Hide Nav (Layer 1, Tab 1), Overview Show Nav (Layer 1, Tab 1, currently selected), Button 2 (Layer 2, Tab 2), Button 1 (Layer 1, Tab 1), Group 1 (Layer 1, Tab 1), Total Cost by Building (Layer 1, Tab 1), Unit Consumed by Co... (Layer 1, Tab 1), and Summary (Layer 1, Tab 1).

22. Click on the Button 2 on the Selection and go to the visual format change the following format for the Button 2.

The 'Visual Format Change' dialog for 'Button 2' is open. Under the 'Action' tab, 'Type' is set to 'Bookmark' and 'Destination' is set to 'None'. Under the 'Tooltip' tab, the 'Text' is set to 'Hide Menu'. At the bottom, there is a 'Reset to default' button.

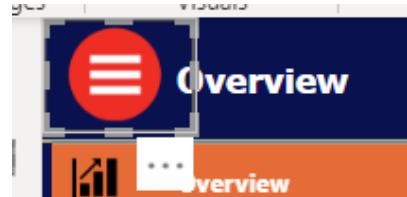
23. Now click **ctrl+Button 2** you will see the Button 1 click on that.

24. Change the following format for button 1.

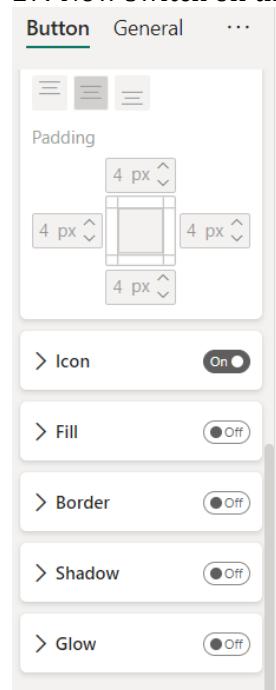


25. If you want to see Menu and Button 2 Click **ctrl+Button 1**.

26. Place the Button 2 on the Button 1 as shown below.



27. Now switch off the Borders for both the Buttons as shown below.



28. Now you see if you want to hide this click **ctrl+Button2** with Tooltip as Hide Menu as shown below.



29. Now copy the Navigator group and paste it in all three reports water, Electricity and Gas.
30. In water page.



31. Now do the same process add two buttons and add two Bookmarks as shown below.

Selection		Bookmarks	
Layer order	Tab order	Add	View
<input type="button" value="▲"/>	<input type="button" value="▼"/>		
Show	Hide		
Button 2	<input type="radio"/>	Overview Hide Nav	
Button 1	<input type="radio"/>	Overview Show Nav	
Group 1	<input type="radio"/>	Water Hide Nav	
Table	<input type="radio"/>	Water Show Nav	<input type="button" value="..."/>
Total Cost by City	<input type="radio"/>		

32. Configure the Bookmarks for each button.

33. For Electricity page Bookmarks.

Bookmarks [»](#) [X](#)

[Add](#) [View](#)

Overview Hide Nav

Overview Show Nav

Water Hide Nav

Water Show Nav

Electricity Hide Nav

Electricity Show Nav

34. For Gas page Bookmarks.

Bookmarks [»](#) [X](#)

[Add](#) [View](#)

Overview Hide Nav

Overview Show Nav

Water Hide Nav

Water Show Nav

Electricity Hide Nav

Electricity Show Nav

Gas Hide Nav [...](#)

Gas Show Nav

35. This is our final Dashboard.

