

REEESAP MONITORING TOOL USER MANUAL

Consultancy Services to Implement Harmonised Regulatory/Technical Frameworks and Synthesised Renewable and Energy Efficiency Strategies in the EA-SA-IO Region

Prepared for:

Enhancement of a Sustainable Regional Energy Market – Eastern Africa, Southern Africa, and Indian Ocean (ESREM: EA-SA-IO)

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Consultancy services to implement harmonised regulatory/technical frameworks and synthesised renewable and energy efficiency strategies in the EA-SA-IO region

This assignment will support the Common Market for Eastern and Southern Africa (COMESA), East African Community (EAC), Intergovernmental Authority on Development (IGAD), Indian Ocean Commission (IOC), and Southern African Development Community (SADC), in their collective efforts to promote the development of a sustainable regional energy market in the Eastern Africa, Southern Africa, and Indian Ocean (EA-SA-IO) region.

Manual

This manual aims to guide the potential users of the Monitoring and Evaluation (M&E) tool through its set-up process and expected usage procedure.

Acknowledgements

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Opinions and Limitations

Unless otherwise indicated, the opinions herein are those of the authors and do not necessarily reflect the views of COMESA, EAC, ESREM, IGAD, IOC, or SADC.

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Cover and below image source: Sections of a 40-foot mural at CPCS headquarters in Ottawa painted by Toronto artist Mike Parsons.

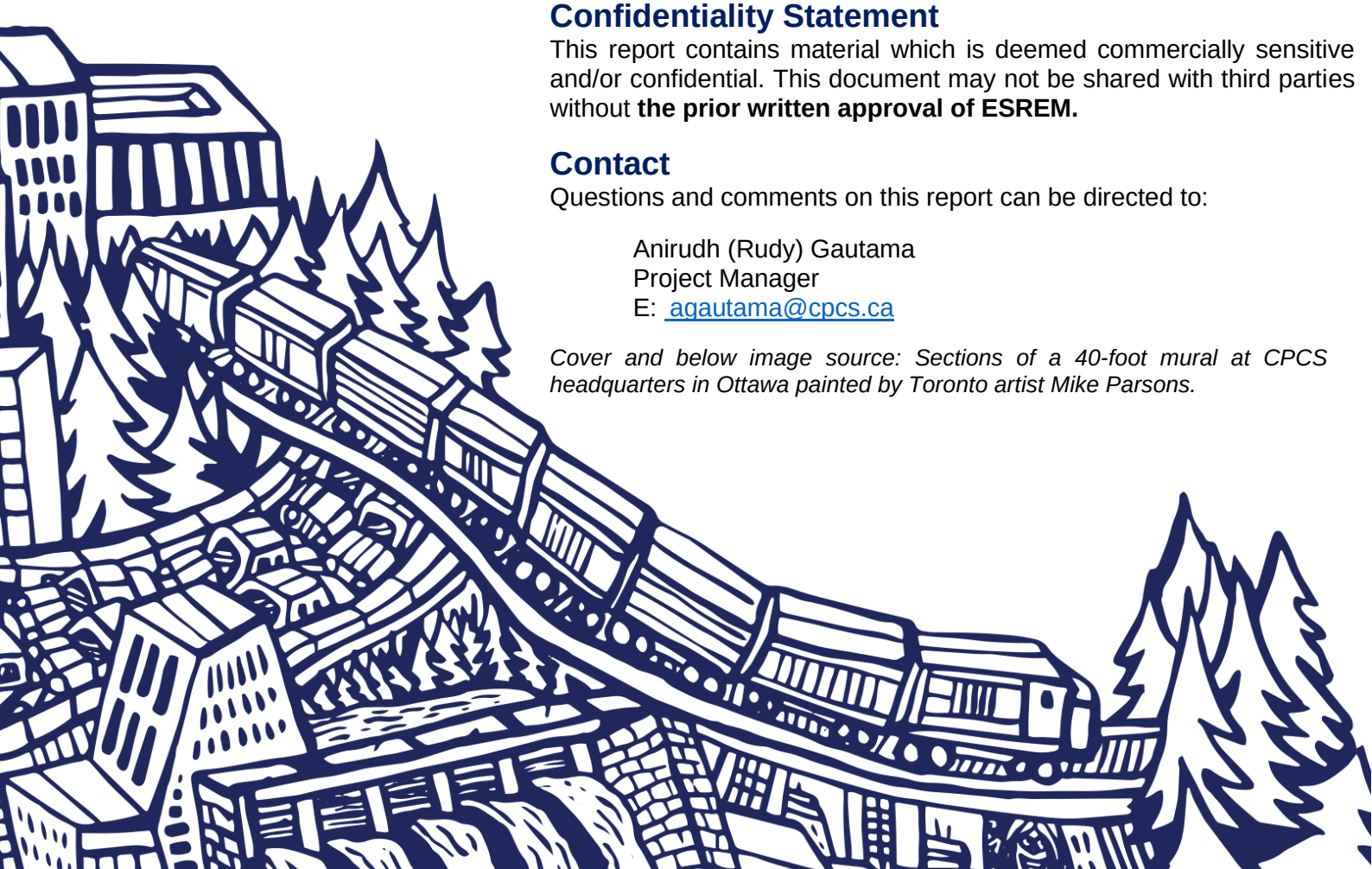


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Acronyms / Abbreviations

Acronym	Definition
EA-SA-IO	Eastern Africa-South Africa-Indian Ocean
M&E	Monitoring and Evaluation
REEESAP	Renewable Energy and Energy Efficiency Strategy and Action Plan
Y-MS	Year Member State
Y-RE	Year Regional

1 Introduction

As part of the Renewable Energy and Energy Efficiency Strategy and Action Plan (REEESAP), a Monitoring and Evaluation (M&E) tool has been developed to effectively track the implementation of the different indicators within the seven constituent pillars of the REEESAP for both the member states and COMESA as the regional entity.

The M&E tool is founded on two main components:

- A questionnaire developed in Microsoft Forms
- A dashboard implemented in Microsoft Power BI

This document aims to guide the potential users of this tool through its set-up process and expected usage procedure.

2 Questionnaire

The questionnaire is the main data collection instrument for the M&E tool and it contains a total of 44 questions from which:

- 36 are targeted only to the Member States.
- 5 are only meant for COMESA as the regional entity.
- 3 are addressed to both the Member States and COMESA.

2.1 Set-Up Process

The questionnaire was designed in Microsoft Forms, an online survey creator and part of the Office 365 suite.

The set-up process consists of duplicating the template provided by Multiconsult by following these steps:

1. Login into COMESA's Office 365 account.
2. Accessing the duplication link provided by Multiconsult. If the link is missing, a COMESA representative should contact Multiconsult to obtain a new link.
3. The questionnaire should appear in COMESA's Microsoft Forms (forms.office.com).

For reference, Figure 2-1 and Figure 2-2 show the Microsoft Forms look once it has been duplicated and the questionnaire once it gets accessed by COMESA respectively.

Please note in Figure 2-2 the tab "Responses" shows a value of 12, showing the questionnaire has already that number of answers. In reality, those 12 answers are dummy and were used to test the system. For the set-up process, the number of responses should show as zero.

Figure 2-1: Successfully Duplicated Form

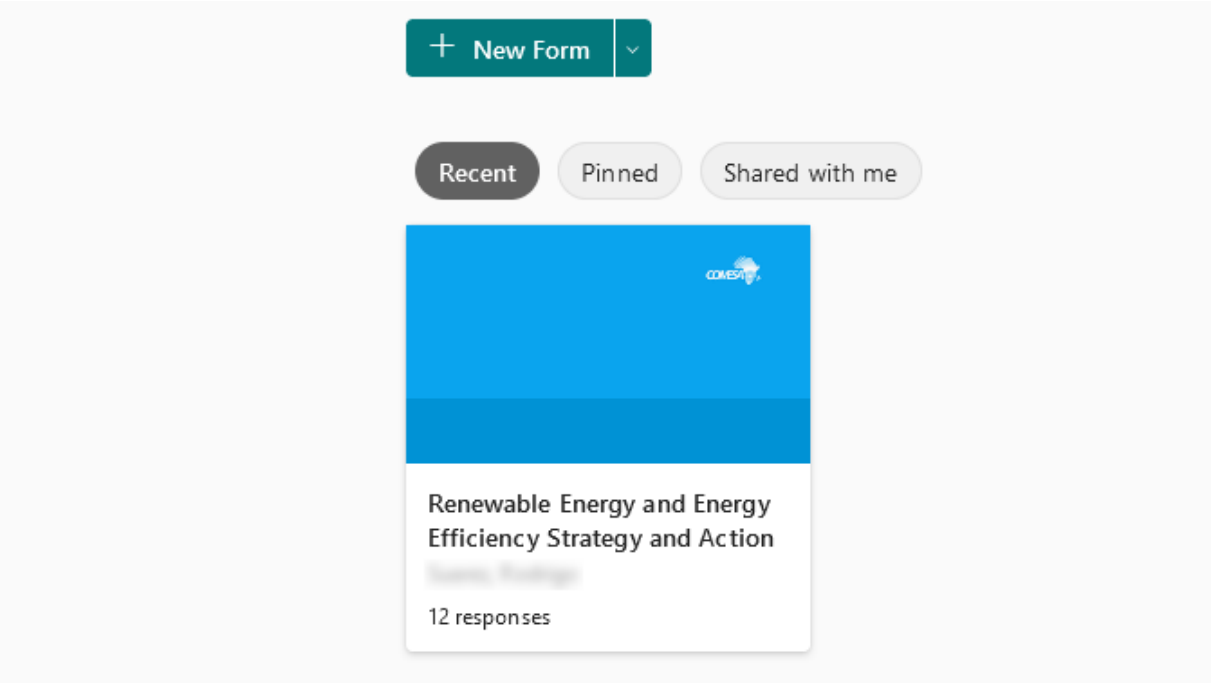
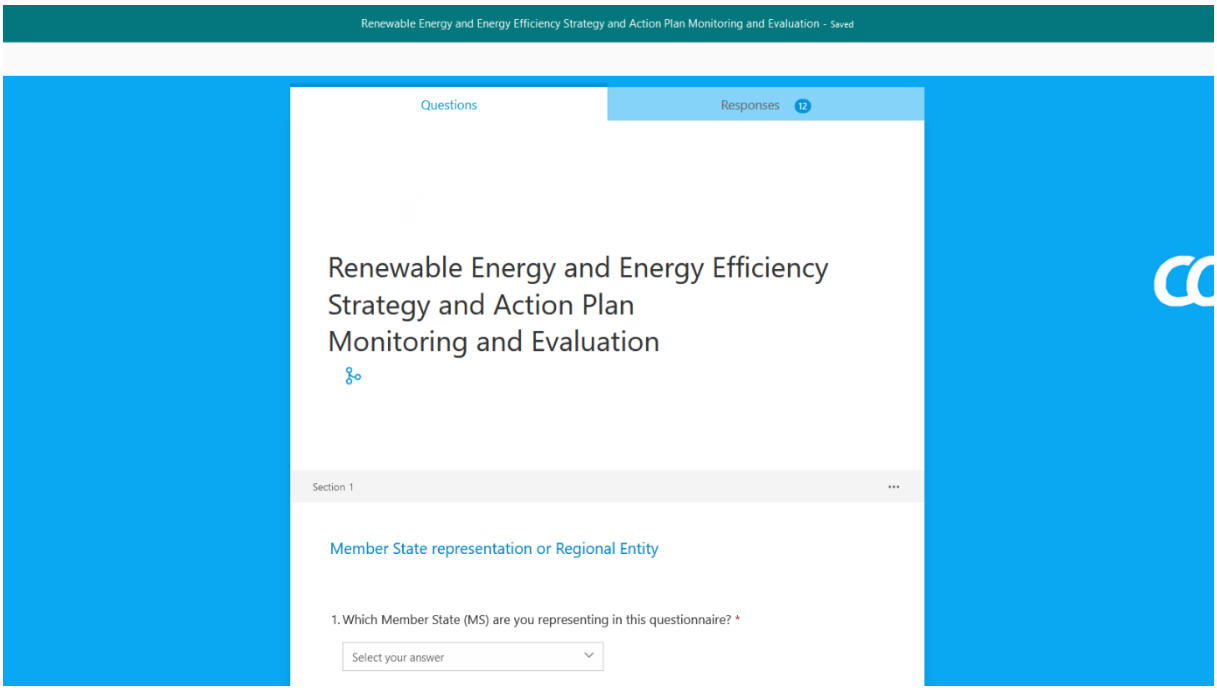


Figure 2-2: Questionnaire Appearance



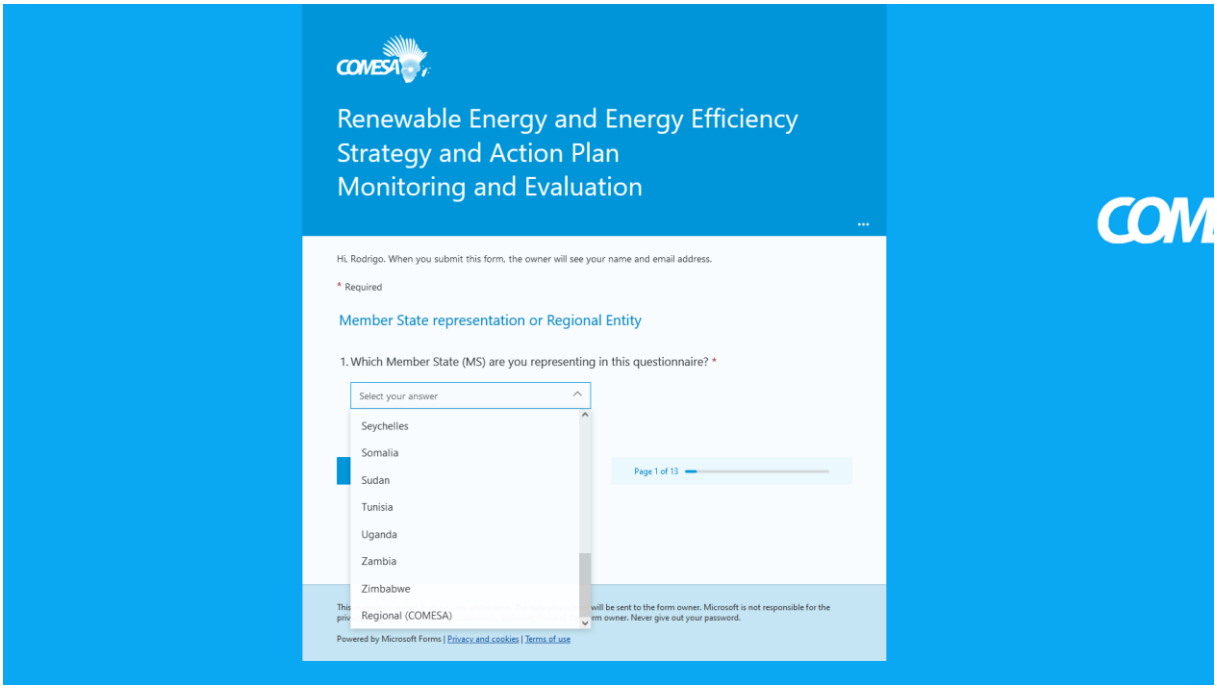
2.2 Questionnaire Structure

In Microsoft Forms, the questionnaire is divided into a total of 13 sections:

- Section 1 filters if the participant represents a Member State or COMESA
- For a Member State representative, the form carries on from Section 2 to Section 8.
- For a COMESA representative, the form jumps to Section 9 and continues until Section 13.

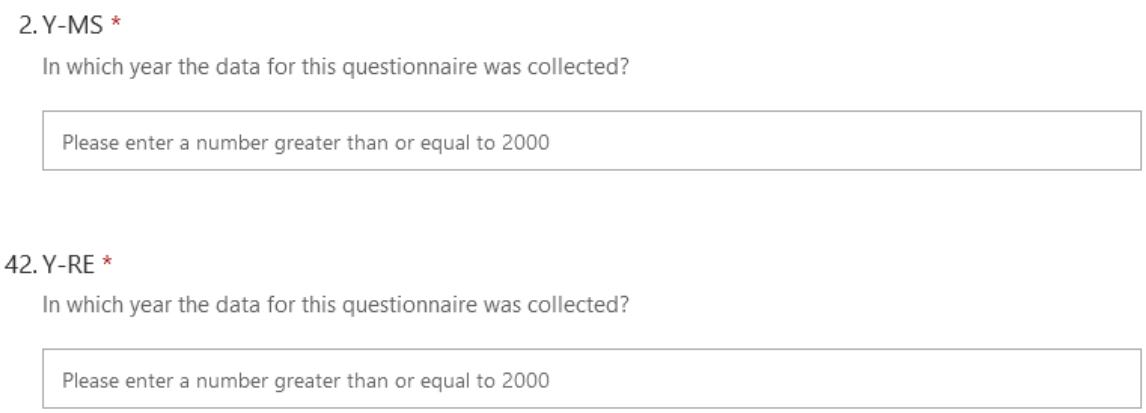
As mentioned at the beginning of this Chapter, Member States and COMESA representatives only share 3 questions between them, the rest are unique to them, hence the need for a filter at the beginning of the questionnaire. Figure 2-3 shows how the representative will see this filter once the questionnaire is deployed.

Figure 2-3: Questionnaire Filter for Member States and COMESA Representatives



Once the participant has been redirected to the appropriate section, the next question refers to the year of the data to be filled in. Since this answer is common to both Member States and COMESA, it is identified as Y-MS (Year Member State) or Y-RE (Year Regional) as Figure 2-4 shows for reference.

Figure 2-4: Data Year for Member States and Regional Entity

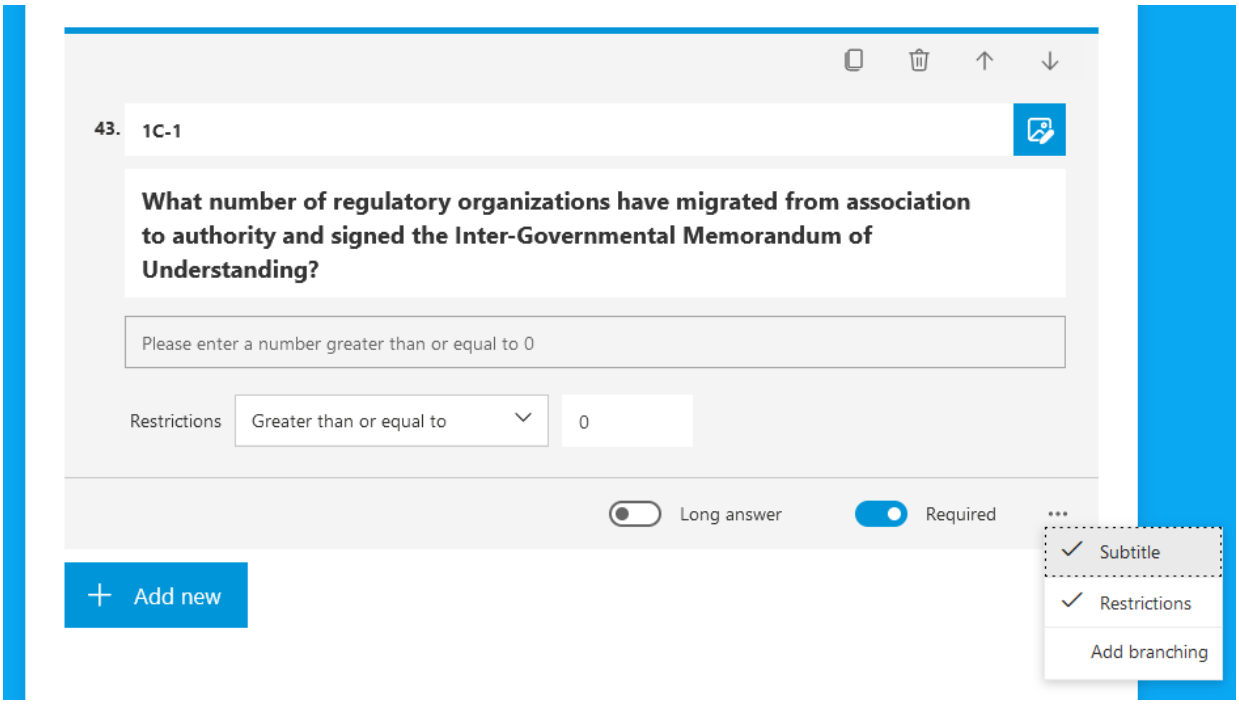


In this regard, it is important to mention every question in the form has an identifier as “Title” and a description as “Subtitle”.

Once the form gets connected to the dashboard in Power BI, each question will be recognised only by its “Title”, so any change to it will break the connection and require a re-setup of the element in the dashboard.

To avoid this issue, and considering the description of the question might be adapted, it was decided to assign a unique and fixed ID to each question in its “Title” and the description as its “Subtitle” as shown in Figure 2-5.

Figure 2-5: Fixed Question ID as Title and Adaptable Description as Subtitle



2.3 List of Questions

The list of questions incorporated in the form is included in Appendix A of this document.

It is worth mentioning all questions require input.

3 Dashboard

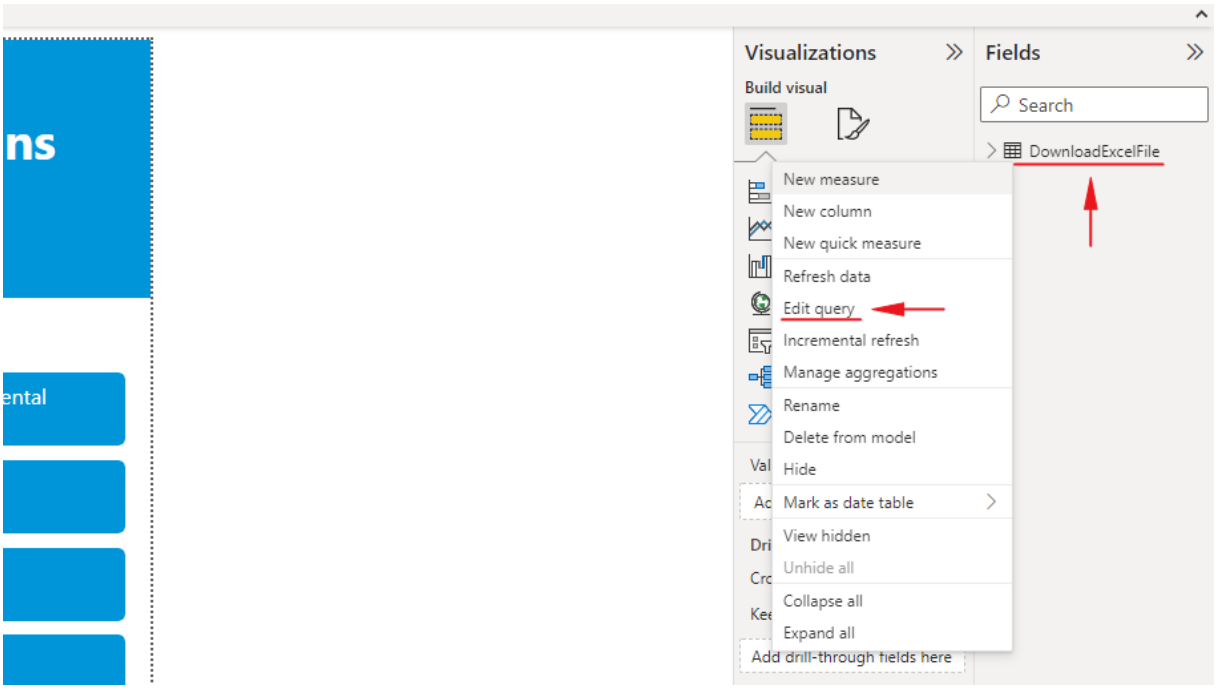
The dashboard was completely developed in Microsoft Power BI and it is connected directly to Microsoft Forms, meaning a simple refresh will update all the indicators in the dashboard.

3.1 Connection Update

Considering the dashboard sent by Multiconsult, to update connection setting to match the Microsoft Form file duplicated by COMESA's to be deployed for use, please follow the following steps:

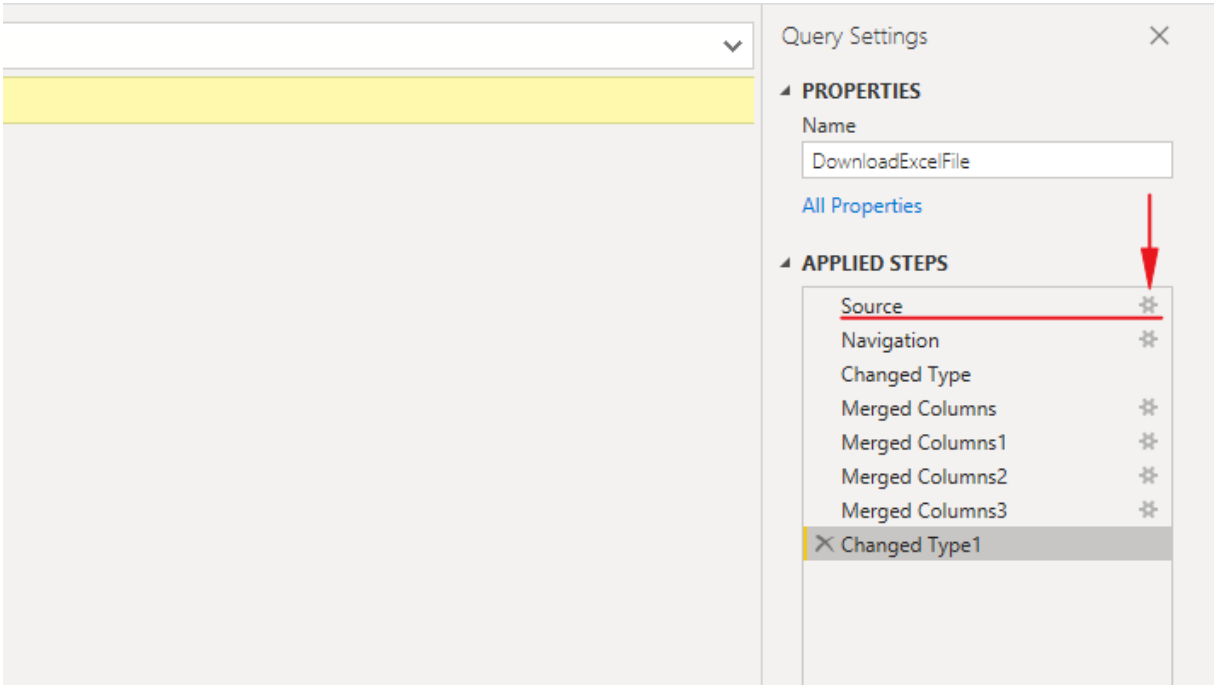
1. Open Power BI dashboard file sent by Multiconsult.
2. On the right-hand side panel titled "Fields" right-click on the data table named "DownloadExcelFile" (See Figure 3-1).
3. On the dropdown menu, click on "Edit query" (See Figure 3-1), this will open a Power Query Editor window.

Figure 3-1: Data Connection - Steps 2 & 3



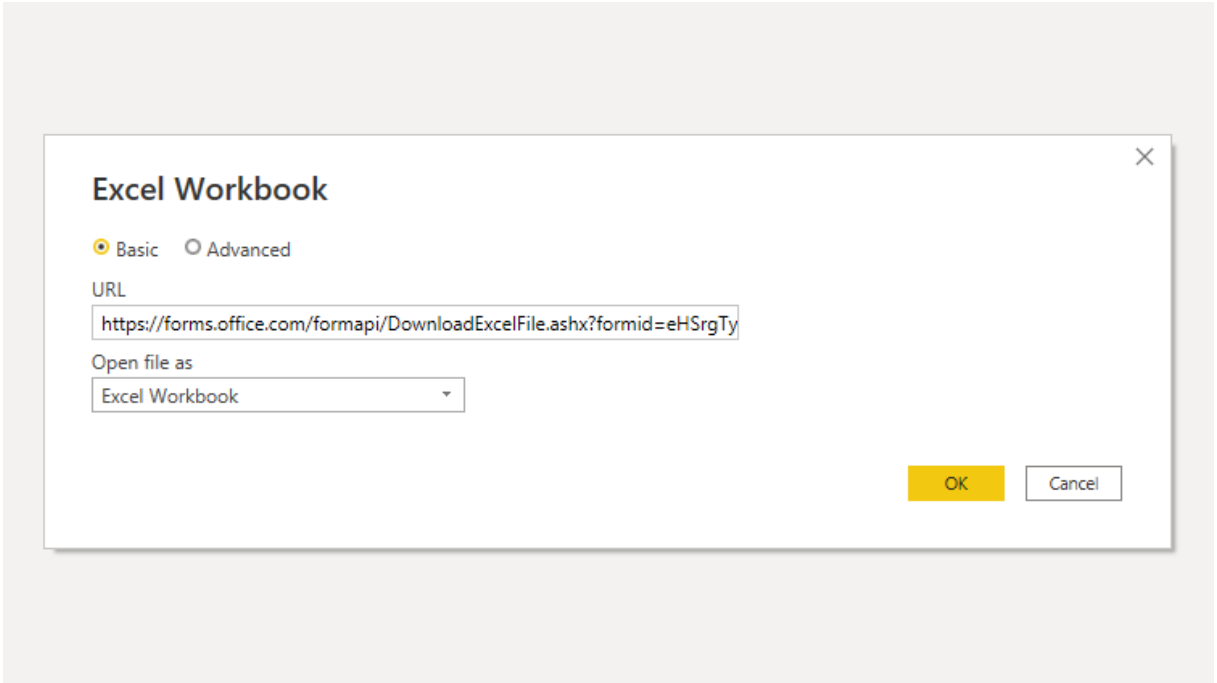
4. On the right-hand side panel "Applied Steps", click on the gear icon next to the first step named "Source" (Figure 3-2).

Figure 3-2: Data Connection - Step 4



5. A new window titled “Excel Workbook” will open as shown in Figure 3-3. The URL field needs to be updated by following these steps:

Figure 3-3: Data Connection - Step 5



5.1: Copy the URL address below:

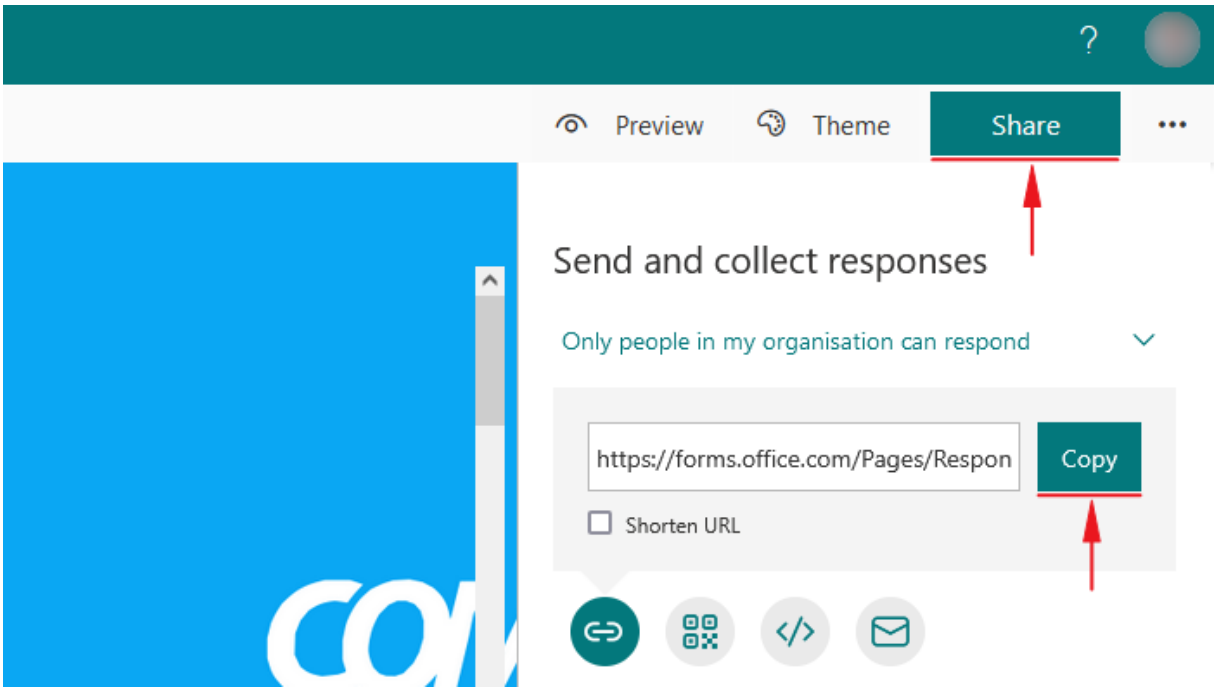
https://forms.office.com/formapi/DownloadExcelFile.ashx?formid=[INSERT FORM ID HERE]&timezoneOffset=[INSERT TIMEZONE OFFSET HERE]&minResponseId=1&masResponseId=1000

5.2: Substitute the [INSERT FORM ID HERE] portion of the URL entirely with the Microsoft Form ID. To obtain it:

5.2.1: Open the duplicated questionnaire in COMESA's Microsoft Form suite.

5.2.2: Click the top right "Share" button, and then under "Send and collect responses" click "Copy" (See Figure 3-4)

Figure 3-4: Data Connection - Step 5.2.2



5.2.3: Paste the copied URL in any text editor (E.G. Notepad). The URL will look similar to the example below:

https://forms.office.com/Pages/ResponsePage.aspx?id=eHSrgTyNNkeLVH8r_Z-iDmgdhdizwitCo5tcLVAM6EtUMzBWN01OSjEzQzdVWlNTVkoxS01SOE1ZTi4u

5.2.4. The form ID is everything after "?id=" in the URL above and highlighted in red colour.

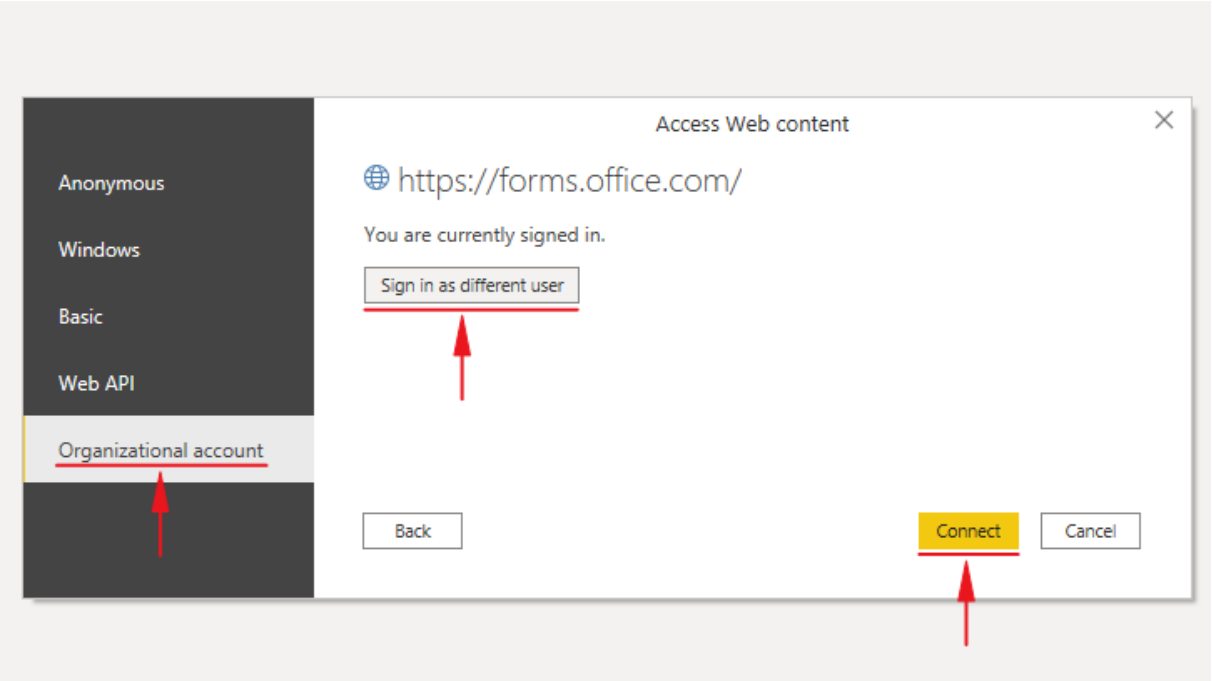
5.3: Substitute the [INSERT TIMEZONE OFFSET HERE] portion of the URL with the time difference between UTC and the location of COMESA expressed in minutes.

For Lusaka, the value to be entered in the URL is 120 (Lusaka is UTC+2, 2 hours equals 120 minutes).

5.4. The final URL with the substituted fields must be copied completely into the URL field sown in Figure 3-3, once done click "OK"

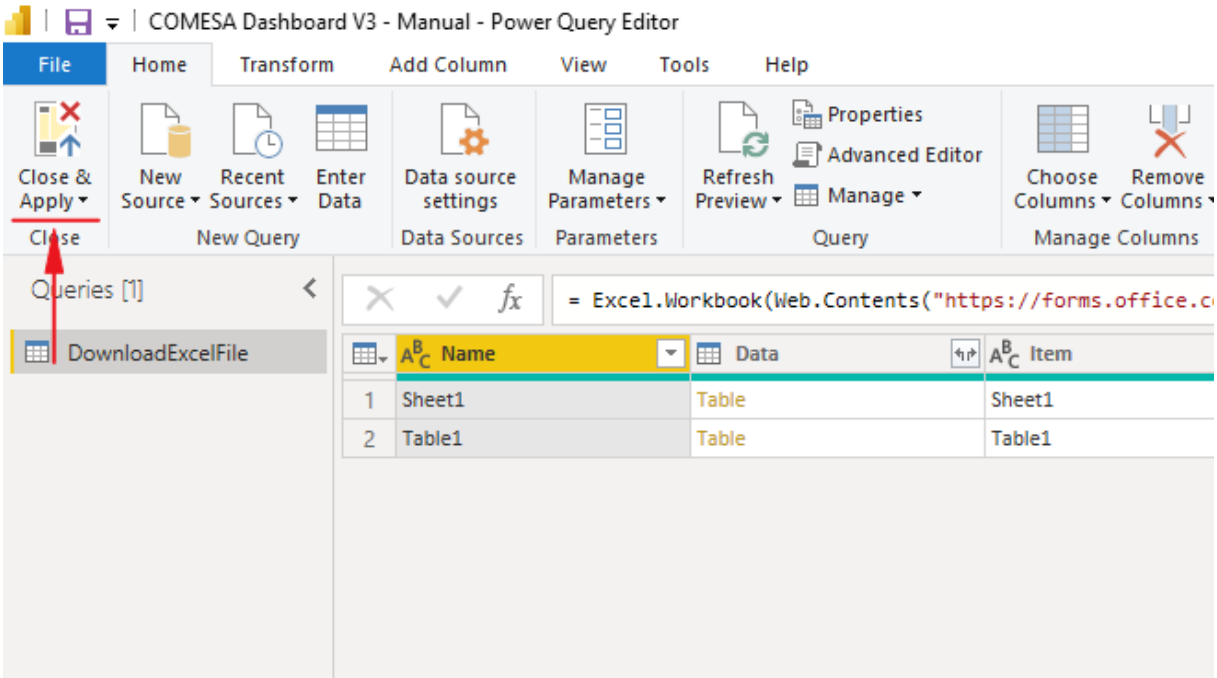
5.5. In the next window, click on "Organizational account", log in with COMESA Office 365 credentials and finally click connect as Figure 3-5 shows for reference

Figure 3-5: Data Connection - Step 5.5



5.6. Finally, click the “Close & Apply” button in the top-left corner (See Figure 3-6). After a few minutes, the dashboard should be updated and ready to be used.

Figure 3-6: Data Connection - Step 5.6



3.2 Dashboard Structure

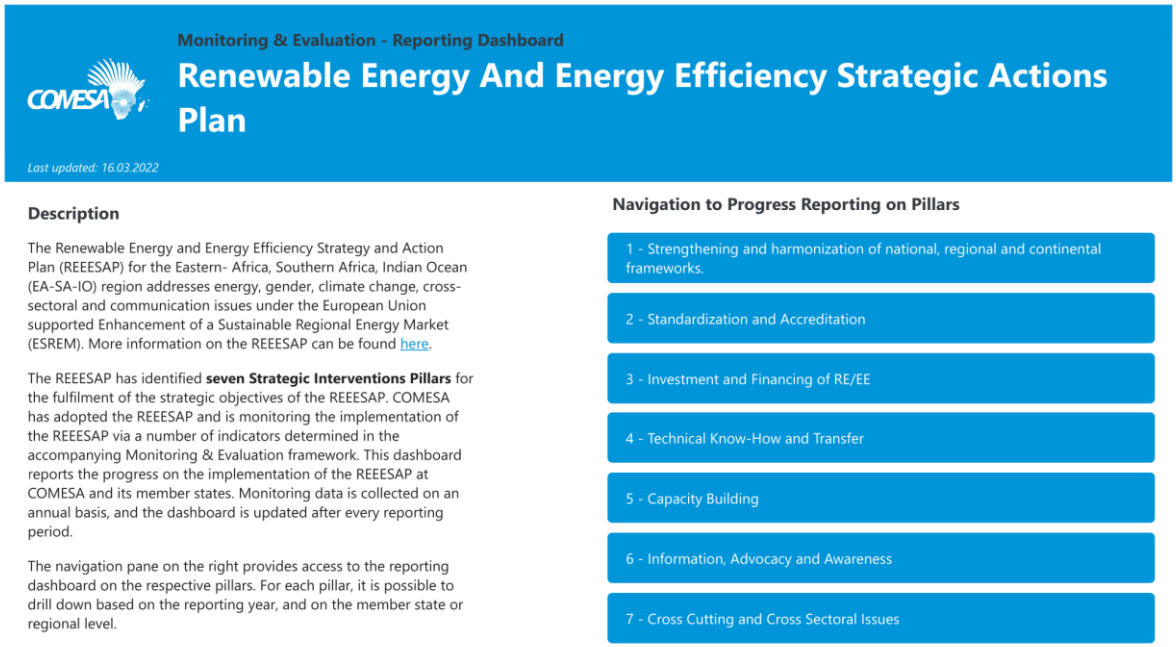
Once the connection has been set up, the dashboard will come “alive”.

In total there are 8 tabs, one as a cover page and the rest reflecting each of the REEESAP pillars.

The cover or “home” page has an introduction to the M&E tool and the dashboard. Also, it offers a navigation menu to jump directly into each of the pillars.

Figure 3-7 shows the home page for reference.

Figure 3-7: Dashboard Home Page



Each pillar has its dedicated page, but its basic layout is the same:

- On the left-hand side, there is an identifier of the pillar followed by a brief description of its purpose.
- Under the description, there is a filter for Member States or Regional (COMESA). This allows the user to analyse case by case if required.
- If the user has applied and filter and wants to go back to the previous view, showing all the data, all it has to do is clicked the filtered country a second time to remove the filter.
- Similarly, there is the possibility to filter the data by year.
- The right-hand side is devoted to the indicators for that pillar.

These come in two basic types: Progress bars showing the percentage of “NO/YES” answers, and cards showing the values for the numerical questions.

Figure 3-8 shows a typical pillar page for reference.

Figure 3-8: Dashboard Pillar Page



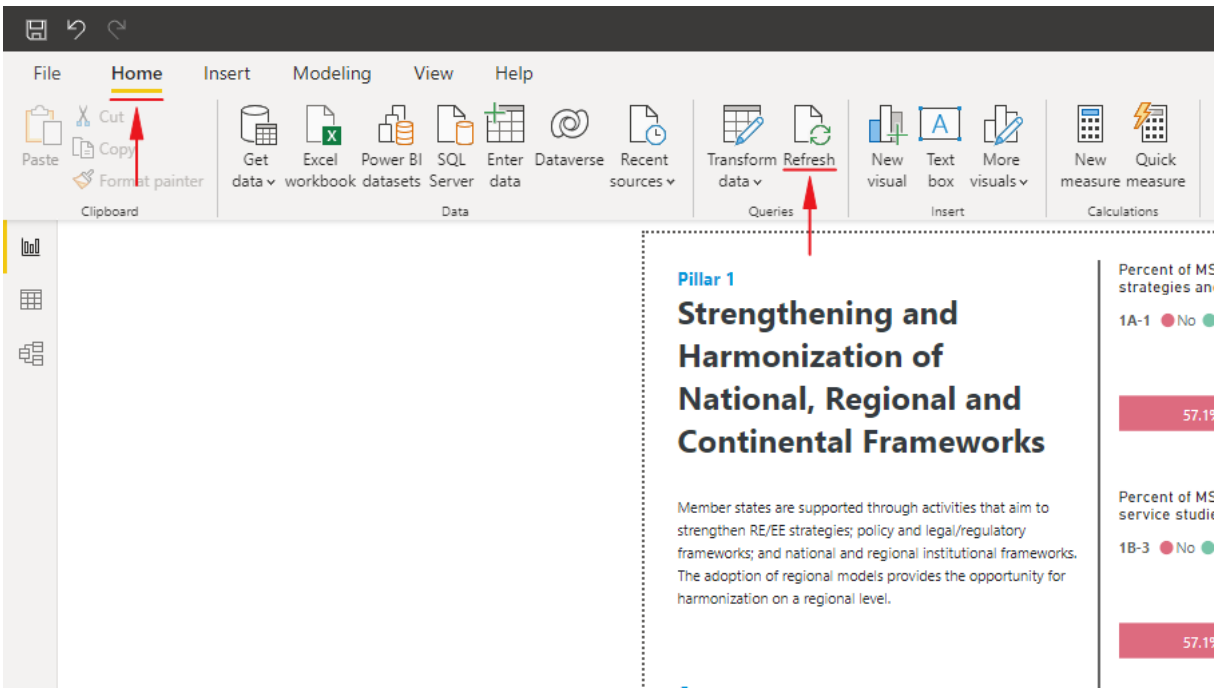
3.3 Response update

Every time a representative completes the questionnaire, a manual refresh of the dashboard must be carried out to incorporate the new data.

To do this, in Power BI navigate to the “Home” tab, then under “Queries” group click on “Refresh” button as Figure 3-9 shows.

After doing this, the new answers will be automatically loaded and shown in the dashboard.

Figure 3-9: Dashboard Refresh Procedure



Appendix A Data used in categorisation of countries

1. Strengthening and Harmonization of National, Regional and Continental Frameworks

1A-1

Does your MS has dedicated Renewable Energy / Energy Efficiency strategies and action plans?

Required Responder: Member State

Response Format: Yes/No

1A-2

Has your MS developed/updated its Integrated Resource Plan within the last 5 years?

Required Responder: Member State

Response Format: Yes/No

1B-1

Has your MS adopted the regional model (or similar) on minigrid/microgrid/offgrid systems and have operating regulatory frameworks?

Required Responder: Member State

Response Format: Yes/No

1B-2

Has your MS adopted the regional model (or similar) on embedded/distributed generation (including net metering)?

Required Responder: Member State

Response Format: Yes/No

1B-3

Has your MS completed a cost of service study in the last 3 years?

Required Responder: Member State

Response Format: Yes/No

1B-4

Has your MS adopted the tariff model recommended by the Regional Economic Community (or similar)?

Required Responder: Member State

Response Format: Yes/No

1B-5

Has your MS migrated to a modified single buyer model or multi-buyer model, as per the regional guidelines (or similar)?

Required Responder: Member State

Response Format: Yes/No

1B-6

Is your MS using the recommended standardized Power Purchase Agreement (or similar) by the Regional Economic Community for Renewable Energy projects?

Required Responder: Member State

Response Format: Yes/No

1B-7

Has your MS revised its grid codes based on regional guidelines on Renewable Energy injection and application of Energy Efficiency measures (or similar)?

Required Responder: Member State

Response Format: Yes/No

1B-8

Has your MS adopted targets for Transmission/Distribution, technical and commercial losses and is reporting based on the agreed reporting guidelines?

Required Responder: Member State

Response Format: Yes/No

1C-1

What number of regulatory organizations have migrated from association

to authority and signed the Inter-Governmental Memorandum of

Understanding?

Required Responder: Regional Entity

Response Format: Number greater or equal to 0

1C-3

Has your MS have a functioning stakeholder platform for public and private sector actors for deliberation on Renewable Energy and Energy Efficiency programmes?

Required Responder: Member State

Response Format: Yes/No

1C-4

Has your MS have a Rural Electrification Agency that fulfils the criteria according to the regional institutional framework (or similar)?

Required Responder: Member State

Response Format: Yes/No

1C-5

What number of Renewable Energy/Energy Efficiency associations are driven by the private sector and have the capacity to advocate for Renewable Energy/Energy Efficiency initiatives?

Required Responder: Member State and Regional Entity

Response Format: Number greater or equal to 0

1C-6

What number of regional or continental platform meetings were held on Renewable Energy/Energy Efficiency?

Required Responder: Regional Entity

Response Format: Number greater or equal to 0

2. Standardization and Accreditation

2-1

Has your MS adopted, implemented and harmonized standards and Minimum Energy Performance Standards for Renewable Energy equipment and appliances based on the Regional Guidelines?

Required Responder: Member State

Response Format: Yes/No

2-2

Does your MS have an enforcement agency for compliance with Minimum

Energy Performance Standards and monitoring systems in place that ensure

that these are met for Renewable Energy/Energy Efficiency appliances

and equipment?

Required Responder: Member State

Response Format: Yes/No

2-3

Is your MS applying guidelines for testing, inspection and certification of Minimum Energy Performance Standards for Renewable Energy/Energy Efficiency based on harmonized protocols for Conformity Assessment Bodies (or similar)?

Required Responder: Member State

Response Format: Yes/No

2-4

Has your MS subscribed to the harmonized labelling system in Regional Economic Community for Renewable Energy/Energy Efficiency equipment and appliances?

Required Responder: Member State

Response Format: Yes/No

2-5

Does your MS have accreditation bodies that certify Conformity Assessment Bodies for ISO50001?

Required Responder: Member State

Response Format: Yes/No

2-6

Does your MS have accreditation bodies that certify Conformity Assessment Bodies for Renewable Energy/Energy Efficiency appliance testing?

Required Responder: Member State

Response Format: Yes/No

2-7

How many centres of excellence can accredit the various service providers (Energy Auditors, M&V, Energy Managers, RE Designers, Installers, O&M)?

Required Responder: Regional Entity

Response Format: Number greater or equal to 0

3. Investment and Financing of Renewable Energy/Energy Efficiency

3-1

What was the amount of financing in USD that was secured for Renewable Energy/Energy Efficiency projects in the last year?

Required Responder: Member State

Response Format: Number greater or equal to 0

3-2

What was the number of financing mechanisms or instruments deployed to provide equity or debt for Renewable Energy/Energy Efficiency projects?

Required Responder: Member State and Regional Entity

Response Format: Number greater or equal to 0

4. Technical Know-How

4-1

Has your MS established the renewable energy resource potential (MW/MWh) by resource type according to the guidelines?

Required Responder: Member State

Response Format: Yes/No

4-2

Has your MS established the Renewable Energy absorption capacity (MW) based on the guidelines?

Required Responder: Member State

Response Format: Yes/No

4-3

How many testing entities and accreditation bodies that apply testing protocol and are accrediting for the recommended testing protocol (or similar) are in your MS?

Required Responder: Member State

Response Format: Number greater or equal to 0

4-4

Has your MS undertaken a market study to assess the potential of embedded generation?

Required Responder: Member State

Response Format: Yes/No

4-5

What is the number of accredited specialized service providers that are practising (Energy Audits for Steam, Refrigeration Systems, etc.)?

Required Responder: Member State

Response Format: Number greater or equal to 0

4-6

How many Alternative Coupe and Shelter Strip System (ACOSSS) for Wood Harvesting projects are there?

Required Responder: Member State

Response Format: Number greater or equal to 0

5. Capacity Building

5-1

Has your MS the capacity to undertake national load forecasting?

Required Responder: Member State

Response Format: Yes/No

5-2

Has your MS the capacity to update all applicable tariffs?

Required Responder: Member State

Response Format: Yes/No

5-3

Does your MS have Conformity Assessment Bodies for Renewable Energy/Energy Efficiency equipment/appliance testing?

Required Responder: Member State

Response Format: Yes/No

5-4

Does your MS have Conformity Assessment Bodies accredited for ISO50001?

Required Responder: Member State

Response Format: Yes/No

5-5

Does your MS have the capacity to carry grid capacity assessment and potential Renewable Energy penetration (based on guidelines developed under REEESAP or similar)?

Required Responder: Member State

Response Format: Yes/No

5-6

Does your MS have the capacity to update grid codes to accommodate Renewable Energy project players (based on guidelines developed under REEESAP or similar)?

Required Responder: Member State

Response Format: Yes/No

5-7

Does your MS have the capacity to develop an Integrated Resource Plan (based on guidelines developed under REEESAP or similar)?

Required Responder: Member State

Response Format: Yes/No

5-8

What number of commercial banks in your MS can analyse Renewable Energy/Energy Efficiency projects?

Required Responder: Regional Entity

Response Format: Number greater or equal to 0

6. Information, Advocacy and Awareness

6-1

Has your MS carried out baseline surveys based on the guidelines by the Regional Economic Community (or similar) on energy balances, energy planning indicators, etc.?

Required Responder: Member State

Response Format: Yes/No

6-2

Does your MS use energy information systems and information management

systems according to the guidelines developed by the Regional Economic

Community (or similar)?

Required Responder: Member State

Response Format: Yes/No

7. Cross-Cutting and Cross-Sectoral

7-1

Has your MS adopted regional guidelines on gender mainstreaming (or similar) in energy and climate change initiatives and planning?

Required Responder: Member State

Response Format: Yes/No

7-3

What number of projects in the Renewable Energy/Energy Efficiency space has had a special focus on gender (e.g. RfP focusing on women-led projects)?

Required Responder: Member State and Regional Entity

Response Format: Number greater or equal to 0

7-4

How many renewable energy generation projects have included self-consumption for productive uses in the agricultural sector?

Required Responder: Member State

Response Format: Number greater or equal to 0

7-5

How many cross-sectoral minister's meetings at Regional Economic Community level has there been on the energy-water-food nexus?

Required Responder: Regional Entity

Response Format: Number greater or equal to 0

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